

BIOLOGICAL ABSTRACTS

A COMPREHENSIVE ABSTRACTING AND INDEXING JOURNAL
OF THE WORLD'S LITERATURE IN THEORETICAL
AND APPLIED BIOLOGY, EXCLUSIVE
OF CLINICAL MEDICINE

Volume 13

1939

Published (beginning with the literature of 1926) under the Auspices of the
UNION OF AMERICAN BIOLOGICAL SOCIETIES
With the Cooperation of Biologists Generally

Editorial and Executive Offices: University of Pennsylvania
Philadelphia, Pennsylvania, U. S. A.

TABLE OF CONTENTS

General Biology	
Philosophy of Biology: <i>Entries</i> 1-2, 1662-1665, 3406-3408, 5255-5256, 8868-8869, 10671-10677, 12461-12462, 14313	Limnology: <i>Entries</i> 136-140, 1851-1856, 3522-3527, 5394-5399, 7222-7234, 9042-9049, 10799-10804, 12609-12617, 14398-14404, 16274-16275
Microscopy, Instruments, Technique: <i>Entries</i> 3-4, 1666-1670, 3409-3411, 5257-5265, 7060-7068, 10678-10679, 12463-12467, 14314-14315, 16115-16125	Wildlife Management—Aquatic: <i>Entries</i> 141-159, 1857-1876, 3528-3533, 5400-5412, 7235-7241, 9050-9062, 10805-10814, 12618-12632, 14405-14423, 16276-16285
Taxonomy and Nomenclature: <i>Entries</i> 5, 1671-1672, 3412, 5266-5268, 8870, 10680-10682, 12468, 14316, 16126-16127	Terrestrial: <i>Entries</i> 160-171, 1877-1882, 3534-3542, 5413-5424, 7242-7243, 9063-9071, 10815-10828, 12634-12635, 14424-14437, 16286-16289
Explorations, Expeditions, etc.: <i>Entries</i> 6-8, 1673, 3413	Animal Physiology, Biochemistry and Biophysics
Conservation and Nature Study: <i>Entries</i> 1674, 3414, 8871-8872, 10683-10686, 12469, 14317-14318	General: <i>Entries</i> 172, 1882A-1884, 3543, 5425, 7243A-7245, 9072-9074, 10829-10832, 12643-12645, 14439-14441, 16290-16292
Museums, Botanical and Zoological Gardens, Aquaria, etc.: <i>Entries</i> 1675, 14319	Osmotic and Colloidal Behavior; Electrolytes: <i>Entries</i> 173-183, 1885-1888, 3544-3553, 5426-5437, 7246-7258, 9075-9086, 10833-10848, 12646-12659, 14442-14445, 16293-16307
Texts and Education: <i>Entries</i> 9-11, 1676, 3415, 5269-5270, 7069-7072, 8873-8880, 12470, 10687-10691, 14320, 16128	Enzymes and Catalysts: <i>Entries</i> 184-198, 1889-1899, 3554-3567, 5438-5466, 7259-7277, 9087-9100, 10849-10858, 12660-12683, 14446-14461, 16308-16315
Miscellaneous: <i>Entries</i> 12-13, 1677, 3416-3419, 5271-5272, 7073, 8881-8885, 10692-10695, 12471-12475, 14321-14323, 16129-16131	Light and Heat: <i>Entries</i> 1900-1904, 3568-3571, 5440-5443, 7273-7280, 9101-9105, 12684-12690, 14462-14463, 16315-16318
Biography and History	Electricity, X-Ray, Radium: <i>Entries</i> 199-205, 1905-1910, 3572-3579, 5470-5476, 7281-7283, 9106-9107, 10859-10861, 12691-12705, 14464-14475, 16319-16327
History: <i>Entries</i> 14, 1678, 3420-3421, 5273-5275, 7074, 8886, 10696-10698, 12476, 14324-14325, 16132	Oxidation and Reduction: <i>Entries</i> 206-208, 1909-1910, 5477-5479, 7284-7286, 9108-9109, 12706-12711, 14476-14479, 16328-16332
Biography: <i>Entries</i> 15-30, 1679-1687, 3422-3432, 5276, 7075-7083, 8887-8895, 10699-10705, 12477-12487, 14326-14332, 16133-16147	Methods and Apparatus
Bibliography: <i>Entries</i> 1687A-1691, 3433-3437, 5277-5280, 7084-7089, 8896-8897, 10706-10710, 12488-12498, 14333-14338, 16148-16149	Biochemical and Biophysical: <i>Entries</i> 209-223, 1911-1943, 3580-3595, 5480-5493, 7287-7316, 9110-9131, 10862-10871, 12712-12733, 14480-14485, 16333-16386
Evolution: <i>Entries</i> 34-35, 1692-1694, 3438-3443, 5281-5283, 7090, 8898-8902, 12499-12500, 14339-14342	Physiological: <i>Entries</i> 224-243, 1944-1949, 3596-3614, 5494-5499, 7317-7328, 9132-9138, 10872-10878, 12735-12741, 14486-14492, 16387-16397
Cytology	Blood and Body Fluids: <i>Entries</i> 244-259, 1950-1999, 3615-3656, 5500-5517, 7329-7396, 9139-9158, 10879-10944, 12742-12771, 14493-14516, 16398-16442
General: <i>Entries</i> 36-39, 1695-1696, 3444-3447, 5284, 7091-7092, 8903-8904, 10711, 14343-14344, 16150	Nutrition, Diet, Vitamins, General Metabolism, Growth
Plant: <i>Entries</i> 40-50, 1697-1714, 3448-3451, 5285-5295, 7093-7109, 8905-8910, 10712-10721, 12501-12510, 14345-14348, 16151-16160	Metabolism, General: <i>Entries</i> 260, 2000-2004, 3657-3659, 5518-5523, 9159-9161, 10945-10947, 16443-16450
Animal: <i>Entries</i> 51-61, 1715-1733, 3452-3453, 5296-5300, 7110-7123, 8911-8920, 10722-10724, 12511-12513, 14349-14354, 16161-16165	Food and Nutrition: <i>Entries</i> 261-272, 2005-2013, 3660-3661, 5524-5528, 7397-7406, 9162-9178, 10948-10961, 12772-12792, 14517-14521, 16451-16466
Genetics	Diet: <i>Entries</i> 3662
General: <i>Entries</i> 62, 1734-1737, 3454-3455, 5301-5305, 7124-7125, 8921-8923, 10725-10726, 12514-12516	Energy Metabolism: <i>Entries</i> 273-288, 2014-2019, 3663-3670, 5529-5535, 7407-7413, 9179-9185, 10962-10971, 12793-12799, 14522-14527, 16467-16473
Plant: <i>Entries</i> 63-85, 1738-1759, 3456-3459, 5306-5332, 7127-7134, 8924-8944, 10727-10733, 12517-12539, 14355-14365, 16166-16193	Water Balance: <i>Entries</i> 3671-3674, 7414, 14528
Animal (except man): <i>Entries</i> 86-97, 1760-1784, 3460-3468, 5333-5350, 7135-7160, 8945-8958, 10734-10740, 12540-12557, 14366-14374, 16194-16207	Protein Metabolism: <i>Entries</i> 289-296, 2020-2025, 3675-3681, 5536-5539, 7415-7427, 9186-9192, 10972-10976, 12800-12811, 14529-14532, 16474-16484
Man: <i>Entries</i> 1785-1803, 3469-3475, 5351-5359, 7161-7165, 8959-8966, 10741-10745, 12558-12561, 14375-14378, 16208-16212	Carbohydrate Metabolism: <i>Entries</i> 297-300, 2026-2031, 3682-3691, 5540-5545, 7428-7434, 9193-9198, 10977-10985, 12812-12816, 14533-14539, 16485-16491
Biometry : <i>Entries</i> 1804-1819, 3476-3480, 5360-5364, 7166-7173, 8967-8975, 10746-10750, 12562-12563, 14379, 16213-16229	Fat Metabolism: <i>Entries</i> 301-306, 3692-3693, 5546-5547, 7435-7449, 9199-9202, 10986-10988, 12817-12822, 14540-14541, 16492-16496
Ecology	Lipid Metabolism: <i>Entries</i> 3694-3700
General: <i>Entries</i> 103-110, 1820-1826, 3481-3490, 5365-5372, 7174-7175, 8976-8978, 10751, 12564-12565, 14380-14381	Mineral Metabolism: <i>Entries</i> 307-310, 2032-2038, 3701-3704, 7450-7459, 10989-10993, 12823-12830, 14542-14552
Bioclimatology, Biometeorology: <i>Entries</i> 8979-8992, 10752-10764, 12566-12571, 14385-14391, 16230-16248	Growth: <i>Entries</i> 2039-2052, 3705-3710, 5548, 7460-7465, 9203-9214, 10994-10995, 12831-12833, 14553-14556, 16497-16498
Animal: <i>Entries</i> 111-114, 1827-1834, 3491-3499, 5373-5378, 7182-7187, 8993-9007, 10765-10775, 12572-12581, 14392, 16249-16250	Vitamins (General): <i>Entries</i> 311-313, 2053, 3711-3712, 5549-5551, 7466-7470, 9216-9218, 10996-10997, 16499-16502
Plant: <i>Entries</i> 115-133, 1835-1844, 3500-3518, 5379-5389, 7188-7219, 9008-9039, 10776-10791, 12582-12605, 14393-14394, 16251-16269	
Oceanography: <i>Entries</i> 134-135, 1845-1850, 3519-3521, 5390-5393, 7220-7221, 9040-9041, 10792-10798, 12606-12608, 14395-14397, 16270-16273	

TABLE OF CONTENTS

Vitamin A: <i>Entries</i> 314-321, 2054-2058, 3713-3719, 5552-5555, 7471-7474, 9219-9223, 10998-11006, 12834-12836, 14557, 16503-16509	Endocrinopathies: <i>Entries</i> 651-652, 2404-2406, 4267-429, 5851-5864, 7895-7902, 9629-9664, 11351-11354, 1495, 14981, 16927-16938
Vitamin B Complex: <i>Entries</i> 322-324, 2059-2065, 3720-3730, 5556-5567, 7475-7484, 9224-9234, 11007-11012, 12837-12852, 14558-14564, 16510-16529	Nervous and Mental Diseases: <i>Entries</i> 653-655, 240, 2418, 4295-4299, 5865-5868, 7903-7918, 9665-966, 11355-11356, 14982, 16939-16953
Vitamin C: <i>Entries</i> 325-341, 2066-2080, 3731-3737, 5568-5577, 7485-7490, 9235-9237, 11013-11020, 12853-12859, 14565, 16530-16536	Industrial Pathology and Hygiene: <i>Entries</i> 2419-242, 4300-4301, 5869-5878, 7919-7928, 9667-9670, 11357, 11372, 13276-13284, 14983-14995
Vitamin D: <i>Entries</i> 342-343, 2081-2085, 3738-3742, 5578-5580, 7491, 9238-9240, 11021-11024, 12860-12865, 14566-14567, 16537-16544	Vertebrate Anatomy and Histology
Vitamin E: <i>Entries</i> 344, 2086-2088, 5581-5582, 7492-7495, 9241-9242, 11025-11026, 12866-12869, 14568, 16545-16546	General: <i>Entries</i> 2424, 4302-4307
Vitamin K: <i>Entries</i> 7496-7498, 9243-9245, 11027, 12870-12871, 16547-16553	Experimental Anatomy and Regeneration: <i>Entrie</i> 656-658, 4308-4309, 9671-9675, 11373-11376, 14996, 14999
Digestive System and Digestive Secretions: <i>Entries</i> 345-365, 2089-2114, 3743-3770, 5583-5603, 7499-7526, 9246-9270, 11028-11041, 12872-12917, 14569-14586, 16554-16571	Gross Anatomy (except primate): <i>Entries</i> 659-666, 2425, 4310-4315, 5879-5880, 7929-7931, 9676-9680, 11377-11382, 13285-13290, 15000-15002, 16954-1695
Respiration: <i>Entries</i> 366-373, 2114A-2116, 3771-3785, 5604-5608, 7527-7533, 9271-9276, 11042-11047, 12918-12928, 14587-14606, 16572-16585	Hematology (incl. reticulo-endothelium): <i>Entries</i> 667, 2426-2428, 4316-4320, 5881-5886, 7932-7937, 9681, 9682, 11383-11386, 13291, 15003-15005, 16960-1696
Endocrinology: <i>Entries</i> 374-399, 2117-2130, 3786-3934, 5609-5651, 7534-7551, 9277-9391, 11048-11072, 12929-12999, 14607-14654, 16586-16639	Vascular System (incl. lymphatics): <i>Entries</i> 668-676, 2429-2433, 4321-4325, 5887-5891, 7938-7943, 9683, 9687, 11387, 13292-13296, 15006-15009, 16965
Chemical Mediators of Nerve Impulses: <i>Entries</i> 400-405, 2131-2133, 3935-3938, 5652, 7552-7557, 9392-9395, 11073-11085, 13000-13005, 14655-14666, 16640-16644	Neurology: <i>Entries</i> 677-687, 2434-2437, 4326-4335, 5892, 5893, 7944-7962, 9688-9689, 11388-11403, 13297, 13301, 15010-15018, 16966-16979
Kidney, Urine, and External Secretions: <i>Entries</i> 406-411, 2134-2153, 3939-3953, 5653-5663, 7558-7573, 9396-9409, 11086-11094, 13006-13028, 14667-14673, 16645-16656	Endocrine Glands: <i>Entries</i> 688-692, 2438-2442, 4336-4340, 5894-5901, 7963-7972, 9690-9698, 11404-11417, 13302, 13305, 15019-15026, 16980-16991
Reproduction and Lactation: <i>Entries</i> 412-429, 2154-2171, 3954-3978, 5664-5677, 7574-7604, 9410-9433, 11095-11114, 13029-13050, 14674-14689, 16657-16666	Genito-urinary System: <i>Entries</i> 693-696, 2443-2444, 4341-4343, 7973-7976, 11418, 15027-15029, 16992, 16993
Reactions of the Organism as a Whole: <i>Entries</i> 430-436, 2172-2195, 3979-3999, 5678-5684, 7605-7627, 9434-9453, 11115-11122, 14690-14698, 16667-16676	Skin and Its Appendages: <i>Entries</i> 697-701, 4344-4346, 5902-5903, 7977-7979, 9699, 11419-11422, 15030, 15034, 16994
Sense Organs: <i>Entries</i> 437-444, 2196-2217, 4000-4006, 5685-5689, 7628-7636, 9454-9471, 11123-11131, 13051-13060, 14699-14708, 16677-16682	Alimentary System: <i>Entries</i> 702-704, 2445-2450, 4347, 4359, 5904-5909, 7980-7983, 9700-9704, 11423-11427, 13306-13308, 15035-15041, 16995-16996
Ophthalmology: <i>Entries</i> 7637-7649, 9472-9482, 11132-11135, 13061-13067	Respiratory System: <i>Entries</i> 705, 7984-7985, 9705, 13309, 13310
Nervous System: <i>Entries</i> 445-466, 2218-2245, 4007-4037, 5690-5702, 7650-7672, 9483-9491, 11136-11145, 13068-13084, 14709-14738, 16683-16705	Bones, Muscles, Joints, Fasciae: <i>Entries</i> 706-713, 2451, 4360-4362, 5910-5916, 7986-7988, 9706-9708, 11428, 13311-13313, 16997-16998
Motor Apparatus: <i>Entries</i> 467-474, 2246-2263, 4038-4054, 5703-5708, 7673-7699, 9492-9506, 11146-11159, 13085-13098, 14739-14752, 16706-16720	Technique: <i>Entries</i> 714-716, 4363-4364, 5917-5919, 7989, 8002, 9709-9713, 11429-11432, 15042-15047, 16999, 17003
Vascular System: <i>Entries</i> 475-506, 2264-2281, 4055-4100, 5709-5728, 7700-7734, 9507-9536, 11160-11208, 13099-13135, 14753-14782, 16721-16751	Unclassified: <i>Entries</i> 717-718, 4365-4370, 5920, 8003-8006, 9714-9715, 11433, 13314-13315, 15048-15050
Pharmacology: <i>Entries</i> 507-556, 2283-2339, 4101-4173, 5729-5794, 7735-7814, 9537-9577, 11209-11262, 13136-13189, 14783-14866, 16752-16818	Physical Anthropology: <i>Entries</i> 720-728, 2452-2465, 4371-4376, 5921-5944, 8007-8031, 9716-9757, 11434-11440, 13316-13322, 15051-15058, 17004-17034
The Special Physiology, Pathology, and Anatomy of Infancy and Childhood: <i>Entries</i> 557-565, 2340-2351, 4174-4177, 5795-5797, 7815-7820, 9578-9580, 11263-11273, 13190-13194, 14867-14872, 16819-16827	Vertebrate Embryology
Pathology	Descriptive: <i>Entries</i> 729-738, 2466-2467, 4377-4384, 5945-5952, 8032-8039, 9758-9765, 11441-11447, 13323-13329, 15059-15071, 17035-17046
General: <i>Entries</i> 566-567, 2352, 13195-13196	Experimental: <i>Entries</i> 739-759, 2468-2473, 4385-4393, 5953-5962, 8040-8053, 9766-9774, 11448-11454, 13330-13337, 15072-15084, 17047-17053
Neoplasms: <i>Entries</i> 568-616, 2353-2375, 4178-4229, 5798-5814, 7822-7858, 9581-9600, 11274-11302, 13197-13235, 14873-14911, 16828-16887	Anomalies, Monsters, and Marked Variations in Development: <i>Entries</i> 760-764, 4394-4396, 5963-5967, 9775-9779, 11455-11461, 13338-13340, 15085-15089, 17054-17059
Inflammation and Infectious Diseases: <i>Entries</i> 617-629, 2376-2386, 4230-4239, 5815-5824, 7859-7868, 9601-9611, 11303, 13236-13248, 14912-14921, 16888-16907	Invertebrate Embryology and Histology: <i>Entries</i> 765-771, 2474-2479, 4397-4401, 5968-5973, 8054-8064, 9780-9796, 11462-11470, 13341-13349, 17060-17066
Degenerative Diseases: <i>Entries</i> 630-631, 2387, 7869-7870, 9612-9614, 11304-11306, 14922, 16908-16910	Animal Production
Blood Diseases: <i>Entries</i> 632-649, 2388-2401, 4240-4257, 5825-5843, 7871-7889, 9615-9622, 11307-11336, 13249-13264, 14923-14936, 16911-16916	General: <i>Entries</i> 772-782, 2480-2501, 5974-5975, 8065, 11471-11474, 13350-13352, 15090-15091, 17067-17068
Avitaminoses and Other Deficiency Diseases: <i>Entries</i> 650, 2402-2403, 4258-4266, 5844-5850, 7890-7894, 9623-9628, 11337-11350, 13265-13275, 14937-14953, 16917-16926	Animal Production: <i>Entries</i> 4402-4408, 5976-6003, 8066-8073, 9797-9811, 11475-11493, 13353-13357, 15092-15102, 17069-17083

- Poultry:** *Entries* 783-794, 2502-2514, 4421-4428, 6012-6025, 8093-8095, 9820-9825, 11502-11514, 13336-13388, 15111-15127, 17093-17113
- Smaller Mammals, Fur, and Pet Stock:** *Entries* 11515, 13389, 17114-17115
- Animal Immunology**
- General and Bacterial:** *Entries* 795-931, 2515-2593, 4429-4533, 6026-6117, 8096-8163, 9826-9902, 11516-11566, 13390-13515, 15128-15167, 17116-17223
- Blood Groups:** *Entries* 932-939, 2594-2597, 4534-4536, 6118, 9903, 11567-11568, 13516-13527, 15168-15171, 17224-17235
- Lower Animals:** *Entries* 940-941, 2598-2606, 4537-4542, 6119-6126, 8164-8168, 9904-9907, 11569-11570, 13528-13530, 15172-15173, 17236-17237
- Parasitological:** *Entries* 942-945, 2607-2609, 4543-4548, 6127-6130, 8169-8173, 9908-9913, 11571-11572, 13531-13533, 15174-15178, 17238-17241
- Chemotherapy:** *Entries* 2654-2667, 4549-4578, 6131-6157, 8174-8189, 9914-9941, 11573-11611, 13534-13554, 15179-15216, 17242-17283
- Filterable Viruses, Bacteriophage, etc.**
- General:** *Entries* 946-954, 2610-2631, 4579-4603, 6158-6166, 8190-8216, 9942-9955, 11612-11624, 13555-13589, 15217-15253, 17284-17288
- Lower Animals:** *Entries* 955-959, 2632-2635, 4604-4606, 6167-6173, 8217-8219, 9956-9957, 11625-11629, 13590-13596, 15254-15257
- Bacteriology and Other Microbiology**
- Medical:** *Entries* 960-966, 2640-2653, 4607-4632, 6174-6202, 8220-8245, 9958-9974, 11630-11641, 13597-13618, 15258-15269, 17289-17322
- Fungi Pathogenic for Man and Animals:** *Entries* 967-973, 4633-4646, 6203-6205, 8246-8252, 9975-9982, 11642-11648, 13619-13623, 15270-15272, 17323-17324
- Clinical:** *Entries* 8253-8276, 9983-10006, 11649-11673, 13624-13632, 15273-15290, 17325-17359
- Public Health Bacteriology, Epidemiology and Sanitation:** *Entries* 974-1007, 2668-2689, 4647-4670, 6206-6221, 8277-8316, 10007-10031, 11674-11718, 13633-13661, 15291-15354, 17360-17383
- Infectious and Other Diseases of Lower Animals:** *Entries* 1008-1019, 2690-2718, 4671-4686, 6222-6256, 8317-8329, 11719-11757, 13662-13668, 15355-15391, 17384-17395
- Food and Industrial:** *Entries* 1020-1034, 2719-2733, 4687-4697, 8257-8272, 8330-8337, 10032-10063, 11758-11774, 13669-13678, 15392-15400, 17396-17407
- Dairy:** *Entries* 1035-1042, 2734-2739, 4698-4700, 6273-6292, 8338-8342, 10064-10068, 11775-11783, 13679-13685, 15401-15404, 17408-17418
- Soil:** *Entries* 1043-1051, 2740-2744, 4701-4703, 6293-6296, 8343-8353, 10069-10072, 11784-11788, 13686-13690, 15405-15409, 17419-17442
- General:** *Entries* 1052-1063, 2745-2780, 4704-4721, 6297-6326, 8354-8367, 10073-10094, 11789-11803, 13691-13714, 15410-15427, 17443-17474
- Paleobotany:** *Entries* 2781-2786, 4722-4727, 8368-8372, 10095-10102, 13715-13721, 15428-15432, 17475-17483
- Systematic Botany**
- Algae:** *Entries* 1064-1071, 2787-2794, 4728-4732, 6327-6335, 8373-8385, 10103-10107, 11804-11809, 13722-13726, 15433-15437
- Fungi**
- Fungi:** *Entries* 1072-1083, 2795-2814, 4733-4742, 6336-6360, 8386-8409, 10108-10115, 11810-11831, 13727-13738, 15438-15471, 17484-17502
- Myxomycetes:** *Entries* 1084-1085, 4743, 6361-6362, 11832-11834, 15472
- Lichenes:** *Entries* 1086-1092, 4744-4747, 6363-6368, 8410-8416, 10116-10117, 13739-13741, 15473-15475, 17503-17505
- Bryophyta:** *Entries* 1093-1095, 4748-4753, 6369-6373, 8417-8419, 11835-11846, 15476-15481
- Pteridophyta:** *Entries* 1096-1110, 2815-2819, 4754-4759, 6374-6376, 8420-8424, 11847-11850, 17506-17510
- Spermatophyta**
- General:** *Entries* 2820-2821, 4760, 6377, 11852-11853, 15482-15483
- Gymnospermae:** *Entries* 1111-1112, 2823-2827, 4761-4762, 6378-6380, 8425, 10118, 11853A, 15484-15485, 17511-17513
- Spermatophyta (Mixed):** *Entries* 6381, 10119, 15486
- Angiospermae (Mixed):** *Entries* 2827A-2828A, 4763, 6382, 8426, 11854-11857
- Monocotyledones:** *Entries* 1113-1121, 2829-2842, 4766-4775, 6383-6395, 8427-8429, 10120-10123, 11858-11873, 13742-13749, 15487-15490, 17514-17516
- Dicotyledones:** *Entries* 1122-1145, 2843-2888, 4776-4792, 6396-6429, 8430-8440, 10124-10156, 11873A-11900, 13750-13762, 15491-15510, 17517-17543
- Floristics and Plant Distribution:** *Entries* 1146-1163, 2889-2904, 4793-4802, 6430-6439, 8441-8444, 10157-10162, 11901-11911, 13763-13778, 15511-15516, 17544-17550
- Morphology and Anatomy of Vascular Plants:** *Entries* 1164-1172, 2905-2917, 4803-4814, 6440-6451, 8445-8451, 10163-10173, 11912-11931, 13779-13789, 15517-15526, 17551-17563
- Agronomy**
- Crop Science (Arviculture):** *Entries* 1173-1214, 2918-2963, 4815-4855, 6452-6497, 8452-8477, 10174-10203, 11932-11958, 13790-13846, 15527-15572, 17564-17604
- Soil Science (Edaphology):** *Entries* 1215-1223, 2964-2976, 4856-4864, 6498-6504, 8478-8488, 10204-10213, 11959-11971, 13847-13863, 15573-15583, 17605-17621
- Horticulture:** *Entries* 1224-1281, 2977-3015, 4865-4880, 6505-6527, 8489-8517, 10214-10233, 11972-11995A, 13864-13920, 15584-15620, 17622-17642
- Forestry:** *Entries* 1282-1312, 3016-3040, 4881-4901, 6528-6534, 8518-8553, 10234-10282, 11996-12015, 13921-13967, 15621-15683, 17643-17663
- Pharmacognosy and Pharmaceutical Botany:** *Entries* 1313-1349, 3041-3055, 4902-4909, 6535-6557, 8554-8564, 10283-10295, 12016-12055, 13968-13971, 15684-15696, 17664-17670
- Plant Physiology, Biochemistry, and Biophysics**
- General:** *Entries* 6558
- Absorption, Nutrition:** *Entries* 1350-1354, 3056-3058, 4910-4915, 6559-6564, 8565-8567, 10296-10298, 12056-12062, 13972-13980, 15697-15702, 17671-17677
- Auxins, Growth Hormones:** *Entries* 1355-1362, 3059-3067, 4916-4921, 6565-6579, 8568-8571, 10299-10307, 12063-12073, 13981-13990, 15703-15721, 17678-17688
- Protoplasm:** *Entries* 6580, 10308, 15722, 17689
- Osmosis, Permeability:** *Entries* 1363-1365, 3068-3078, 4922-4924, 6581-6582, 10309-10311, 13991-13996, 15723-15725, 17690-17691
- Germination, Dormancy:** *Entries* 1366-1369, 3079-3081, 6583-6589, 8572-8573, 10312-10313, 12074-12075, 13997-14001, 15726, 17692-17698
- Growth, Development:** *Entries* 1370-1377, 4925, 6590-6593, 8574-8575, 10314-10316, 12076-12079, 14002-14006, 15727-15733, 17699-17707
- Vitamins:** *Entries* 1398-1399, 4926-4927, 15734-15739
- Photoperiodism:** *Entries* 1378-1379, 3082, 4928-4929, 6594, 10317-10318, 12080-12081, 15740-15742, 17708
- Photosynthesis:** *Entries* 1380-1381, 3083-3084, 4930-4934, 6595-6596, 8576-8577, 12082-12088, 14007-14010, 15743, 17709-17711
- Transpiration, Translocation:** *Entries* 1383, 4935-4941, 6597-6598, 8578, 10319, 12089-12091, 17712-17713
- Water Relations:** *Entries* 12092-12093, 15744-15749
- Radiation effects:** *Entries* 1384-1387, 4942, 6599-6601, 10320-10321, 14011-14013, 15751-15755, 17714-17715
- Respiration:** *Entries* 1388-1390, 4943-4944, 6602-6603, 8579-8581, 10322-10328, 12094-12097, 14014-14020, 15757-15760, 17716
- Bioelectrical Effects:** *Entries* 1391-1393, 3095-3096, 15756
- Metabolism, General:** *Entries* 1394, 6604, 15750, 17717
- Carbohydrate Metabolism:** *Entries* 1395, 6605, 8582-8586, 10329, 15761-15766, 17718-17720
- Nitrogen Metabolism:** *Entries* 1396-1397, 3085, 4945, 6606-6608, 8587-8590, 10330-10331, 12098-12100, 15767, 17721
- Organic Acid Metabolism:** *Entries* 15768-15770
- Protein Metabolism:** *Entries* 8591, 14021-14022, 17722-17723

- Hardiness, Low Temperature Relations.** *Entries* 1400-1402, 3086-3087, 4946, 6609, 14023-14027, 15771-15775
- Ascorbic Acid:** *Entries* 3088-3089
- Pigments:** *Entries* 1403-1404, 3090-3092, 4947, 6610-6612, 10332, 12101-12102, 15776, 17724-17731
- Enzymes:** *Entries* 3094, 4948-4950, 6613, 8592, 10333-10335, 12103-12106, 14028-14032, 15777-15779, 17732
- Tropism, Movements:** *Entries* 1405-1406, 6614-6615, 15780
- Toxicity:** *Entries* 1407-1410, 3097, 4951, 6616-6617, 10336-10337, 12107-12111, 15781-15782, 17733-17734
- Polarity, Gradients:** *Entries* 1411, 3098, 4952, 15783
- Apparatus, Methods:** *Entries* 1412-1414, 3099-3100, 4953, 6618, 10338, 12112, 15784-15790, 17735-17737
- Stomata:** *Entries* 8593, 10339, 15791
- Plant Constituents:** *Entries* 3101-3104, 4954, 8594, 10340
- Chemical Constituents:** *Entries* 4955-4956, 6619-6620, 8595-8598, 12113-12116, 17738-17740
- Regeneration:** *Entries* 15792
- Miscellaneous:** *Entries* 1415-1416, 3105, 4957-4960, 6621-6626, 10341, 12117-12118, 14033-14035, 15793, 17741-17745
- Phytopathology**
- Diseases Caused by Fungi:** *Entries* 1417-1429, 3106-3114, 4961-4967, 6627-6636, 8599-8604, 10342-10353, 12119-12131, 14036-14050, 15794-15813, 17746-17762
- Diseases Caused by Bacteria:** *Entries* 1430, 3115-3117, 4968-4972, 6637-6640, 8605, 10354-10356, 14051-14056, 15814-15815, 17763-17765
- Diseases Caused by Phanerogams:** *Entries* 10366, 15816-15817, 17766-17767
- Diseases Caused by Animal Parasites:** *Entries* 1431-1433, 4973, 6641-6643, 8606-8607, 15818-15820, 17768-17774
- Virus Diseases:** *Entries* 1434-1444, 3118-3133, 4974-4982, 6644-6659, 8608-8616, 10357-10363, 12132-12141, 14057-14069, 15821-15834, 17775-17795
- Non-Parasitic Diseases:** *Entries* 1445-1448, 3134-3135, 4983-4986, 6660-6664, 8617-8622, 10364-10365, 14070-14077, 15835-15840, 17796-17808
- Parasitism and Resistance:** *Entries* 1449-1453, 3136-3143, 4987-4998, 6665-6675, 8623-8625, 10367-10371, 12142-12152, 14078-14089, 15841-15864, 17809-17827
- Disease Control:** *Entries* 1454-1475, 3144-3162, 4999-5011, 6676-6688, 8626-8630, 10372-10381, 12153-12161, 14090-14100, 15865-15883, 17828-17845
- Miscellaneous:** *Entries* 1476-1484, 3163-3169, 5012-5014, 6689-6691, 8631-8632, 12162-12169, 15884-15893, 17846-17851
- Economic Entomology**
- General:** *Entries* 1485-1488, 3170-3171, 10382-10387, 12170-12172, 14101-14102, 17852
- Fruits:** *Entries* 1489-1492, 3172-3179, 5015-5021, 6692-6695, 8634-8639, 10388-10403, 12173-12180, 14103-14113, 15894-15898, 17853-17862
- Field, Truck and Greenhouse Crops:** *Entries* 1493-1501, 3180-3189, 5022-5046, 6696-6700, 8640-8646, 10404-10419, 12181-12204, 14114-14122, 15899-15908, 17863-17882
- Stored Products:** *Entries* 1502-1503, 3190-3192, 5047-5048, 10420-10421
- Forest and Shade Trees:** *Entries* 1504-1512, 3193-3199, 5049-5053, 8647-8654, 10422-10433, 12205-12209, 14123-14137, 15909-15912
- Insects Affecting Animals:** *Entries* 1513-1520, 3200-3203, 5054-5065, 6701-6708, 8655-8664, 10434-10445, 12210-12228, 14138-14143, 15913-15924
- Biological Control:** *Entries* 1521-1524, 3204-3209, 5066-5069, 8665-8669, 10446-10459, 12229-12231, 15925-15930
- Insecticides and Apparatus:** *Entries* 1525-1530, 3210-3215, 5070-5080, 6709-6714, 10460-10476, 12231A-12239, 14144-14149, 15931-15935, 17883-17889
- Apiculture:** *Entries* 1531-1537, 8670-8674, 14150-14154, 15936-15940
- Sericulture:** *Entries* 3216-3232, 8675-8679
- Paleozoology:** *Entries* 1538, 3233-3236, 5081-5084, 8680-8681, 12240-12242, 14155, 15941-15944
- Parasitology (Animal):** *Entries* 1539-1574, 3237-3253, 5085-5098, 6715-6759, 8682-8714, 10477-10513, 12243-12274, 14156-14195, 15945-15976, 17890-17924
- Systematic Zoology**
- Protozoa:** *Entries* 1575-1588, 3254-3271, 5099-5105, 6760-6774, 8715-8724, 10514-10530, 12275-12288, 14196-14204, 15977-15980, 17925-17928
- Porifera:** *Entries* 6775-6776, 10531-10532
- Coelenterata and Ctenophora:** *Entries* 3272-3278, 6777-6780, 8725-8729, 10533-10535, 15981-15984
- Platyhelminthes and Mesozoa:** *Entries* 1589-1602, 3279-3281, 5106-5111, 6781-6803, 8730-8734, 10536-10545, 12289-12302, 14205-14212, 15985-15992, 17929-17948
- Nematoda and Nematomorpha:** *Entries* 1603-1604, 3282-3284, 8735-8739, 10546-10548, 14213-14218, 15993-16000, 17949-17961
- Acanthocephala:** *Entries* 3285-3286, 10549-10550
- Rotatoria, Gastrotricha, Echinodera, and Chaetognatha:** *Entries* 6804-6807, 14219-14222
- Echinodermata:** *Entries* 3293-3294, 5112-5113, 10551-10556, 14223-14227, 16004-16007
- Nemertea:** *Entries* 3287-3288, 12303-12304
- Annelida:** *Entries* 1605-1608, 3289-3290, 6808-6817, 12305-12308, 17962-17966
- Brachiopoda, Bryozoa, Phoronidea**
- Brachiopoda:** *Entries* 3291-3292, 6818-6819, 12309-12310, 16001-16003
- Bryozoa:** *Entries* 6820, 12311-12312
- Mollusca:** *Entries* 1609-1612, 3295-3305, 5114-5122, 6821-6828, 8740-8747, 10557-10567, 12313-12316, 14228-14232, 16008-16011
- Myriopoda and Onychophora:** *Entries* 5123-5124, 6829-6832, 8748-8749, 12317-12319, 16012-16014
- Crustacea:** *Entries* 1613-1616, 3306-3310, 5125-5126, 6833-6849, 8750-8761, 10568-10575, 12319A-12337, 14233-14236, 16015-16022, 17967-17973
- Entomology:** *Entries* 3311-3312, 5127-5129, 6850, 8762-8763, 10576-10578, 12338, 14237-14238, 16023-16026, 17974-17978
- Acarina:** *Entries* 1617-1618, 3313-3316, 6851-6856, 10579-10583, 12339-12341, 17979-17983
- Arachnida (Except Acarina):** *Entries* 3317-3321, 6857-6865, 10584-10588, 14239-14243, 17984-17988
- Coleoptera:** *Entries* 3322-3334, 5130-5134, 6865A-6888, 8764-8782, 10589-10597, 12342-12357, 14244-14250, 16027-16034, 17989-17999
- Diptera:** *Entries* 1619-1626, 3335-3340, 5135-5137, 6889-6908, 10598-10600, 12358-12376, 14251-14258, 18000-18011
- Hemiptera and Homoptera**
- Hemiptera:** *Entries* 1627, 3341-3344, 6909-6913, 8783, 10601-10602, 12377-12380, 14259, 16035-16036, 18012-18014
- Homoptera:** *Entries* 1628-1631, 3345-3349, 6914-6918, 8784-8786, 10603-10606, 12381-12383, 14260-14263, 16037-16039, 18015-18021
- Hymenoptera:** *Entries* 1632-1634, 3350-3354, 5138-5140, 6919-6930, 10607-10613, 12384-12390, 14264-14271, 18022-18032
- Lepidoptera:** *Entries* 3355-3359, 5141-5145, 6932-6936, 8787-8795, 10614-10618, 12391-12401, 16040-16044
- Neuropteroids:** *Entries* 3360-3364, 6937-6938, 12402-12410, 16045-16047
- Orthopteroidea:** *Entries* 3365-3366, 6939-6940, 14272-14276
- Smaller Orders of Insecta:** *Entries* 1635-1636, 3367-3371, 5146-5148, 6941-6944, 8796-8802, 12411-12416, 14277-14282, 18033-18039
- Fossil Insecta:** *Entries* 3372-3373, 6945, 5149-5150
- Prochordata:** *Entries* 6946
- Cyclostomata, Elasmobranchii, and Pisces:** *Entries* 1637-1639, 3374-3396, 5151-5163, 6947-6974, 8803-8819, 10619-10629, 12417-12431, 14283-14287, 16048-16056, 18040-18050
- Amphibia and Reptilia**
- General:** *Entries* 6975-6976, 14288
- Amphibia:** *Entries* 3396A-3398, 6977-6980, 8820-8821, 10630-10631, 12432, 18051

TABLE OF CONTENTS

Reptilia: Entries 3399-3405, 5164-5166, 6981-6988, 8822-8824, 10632-10637, 12433-12436, 14289-14291, 16057-16061, 18052-18055

Aves: Entries 1640-1653, 5167-5207, 6989-7036, 8826-8853, 10638-10653, 12437-12440, 14292-14307, 16062-16105, 18056-18084

Mammalia: Entries 1654-1661, 5208-5254, 7037-7059, 8854-8867, 10654-10670, 12441-12460, 14308-14312, 16106-16114, 18085-18108

Introductory Guide to the Indexes: Pages 1811-1813
 Author Index: Pages 1814-1859
 Systematic Index
 Plant Kingdom: Pages 1860-1867
 Animal Kingdom: Pages 1868-1883
 Geographical Index: Pages 1884-1892
 Geological Index: Page 1893
 Subject Index: Pages 1894-2154

TABLE OF CONTENTS FOR SECTION SUBSCRIBERS

Sectional subscribers will find this condensed table of contents useful in determining whether or not a given index number appears in their particular section.

SECTION A

Entries 1-171; 1662-1882; 3406-3542; 5255-5424; 7060-7243; 8868-9071; 10671-10828; 12461-12635; 14313-14437; 16115-16289

SECTION B

Entries 103-794; 1820-2514; 3481-4428; 5365-6025; 7174-8095; 8976-9825; 10751-11515; 12564-13389; 14380-15127; 16230-17115

SECTION C

Entries 795-1063, 1539-1604; 2515-2780, 3237-3286; 4429-4721, 5085-5111; 6026-6326, 6715-6803; 8096-8367, 8682-8739; 9826-10094, 10477-10550; 11516-11803, 12243-12302; 13390-13714, 14156-14218; 15128-15427, 15945-16000; 17116-17474, 17890-17961

SECTION D

Entries 103-171, 1064-1484; 1820-1882, 2781-3169; 3481-3542, 4722-5014; 5365-5424, 6327-6691; 7174-7243, 8368-8633; 8976-9071, 10095-10381; 10751-10828, 11804-12169; 12564-12635, 13715-14100; 14380-14437, 15428-15893; 16230-16289, 17475-17851

SECTION E

Entries 103-171, 1485-1661; 1820-1882, 3170-3405; 3481-3542, 5015-5254; 5365-5424, 6692-7059; 7174-7243, 8634-8867; 8976-9071, 10382-10670; 10751-10828, 12170-12460; 12564-12635, 14101-14312; 14380-14437, 15894-16114; 16230-16289, 17852-18055

ERRATA

Abstract
No.

1219 line 3: after *Carolina* insert *U. S. Dept. Agric. Bur. Chem. and Soils*
 1386 lines 2 and 4: for *Cystosira* read *Cystosetra* and *Cystosera* read *Cystosetra*
 3189 line 5: for *Gnorischema* read *Gnorimoschema*
 6420 should be in the section "*Mollusca*"
 6431 line 7: for *Euodia* read *Evodia*
 6629 should be in the subsection "*Virus Diseases*"
 6828 line 5: for *Psamosolen* read *Psammosolen*
 6833 should be in section "*Crustacea*"
 6968 line 6: for *Atpopochilus* read *Atopochilus*

Abstract
No.

7035 line 3: for *Glaudiolum* read *Glaucidium*
 8248 line 1: for *Haul-* read *Haut-*
 8715 line 23: for *Peridinieae* read *Peridinidae*
 8760 line 4: for *Illyrionthes* read *Illyrionethes*
 10121 line 10: for *Calyptrocalyx* read *Calypetrocalyx*
 10172 line 5: for *Hidalgo* read *Hidalgoa*
 10451 line 12: for *Trioxys* read *Trioxys*
 10556 this abstract belongs in section "*Mollusca*"
 10695 line 17: for *Antiochus VI* read *Simon Maccabaeus*
 10714 line 5: for *Paphlodatum* read *Paphiopedilum*

Abstract
No.

12190 line 1: for *Horcius* read *Horcias*
 12316 line 19: for *Salassiella* read *Salasiella*
 12377 line 4: for *Phantoma* read *Phatnoma*
 13739 line 1: for *Hydrotheria* read *Hydrothyria*
 14116 line 1: for *Gasterocercodes* read *Gasterocercodes*
 14225 line 5: for *Nidorella* read *Nidorella*
 15937 line 9: for *Achoria* read *Achroia*
 15943 line 11: for *Asmaea* read *Aemaea*
 17486 line 3: for *Daedalla* read *Daedalea*

BIOLOGICAL ABSTRACTS

VOL. 13, NO. 11, 1939.

Publication Office: 1500 Greenmount Ave., Baltimore, Md.
Executive and Editorial Office: University of Pennsylvania, Philadelphia, Pa., U.S.A.

BOARD OF TRUSTEES OF BIOLOGICAL ABSTRACTS

Howard P. Barss	Alden B. Dawson, <i>Treasurer</i>	M. Llewellyn Raney
Albert F. Blakeslee	H. B. Goodrich	Edmund W. Sinnott
Paul R. Burkholder	Arthur P. Hitchens	Conway Zirkle, <i>Secretary of</i>
Anton J. Carlson, <i>Vice-president</i>	George W. Hunter, III, <i>President</i>	<i>Board of Trustees</i>
	Don D. Irish	

STAFF OF THE CENTRAL EDITORIAL OFFICE

<i>Scientific</i>	<i>Bibliographic</i>	<i>Business Office</i>
John E. Flynn, <i>Editor-in-Chief</i>	Madaline Cremen	H. I. Anderson, <i>Business Manager</i>
Jean MacCreight, <i>Assistant Editor</i>	Margaret Danaher	
	Rose Feldman, <i>Librarian</i>	
	Marjorie Gerken	Hazel Hall
	Catherine McElduff, <i>Asst. to Editor</i>	
	Helen Rehill	
	Esther Weintraub	

The indexes to the present volume were prepared by Jean MacCreight,
with the assistance of Sarah H. Stabler and Ruby M. Friedman.

CONTENTS FOR INDEX ISSUE, 1939

ABSTRACTS

Aves	Abstracts 18056-18084
Mammalia	Abstracts 18085-18108

INDEXES

Introductory Guide to the Indexes	pages 1811-1813
Author Index	" 1814-1859
Systematic Index	
Plant Kingdom	" 1860-1867
Animal Kingdom	" 1868-1883
Geographical Index	" 1884-1892
Geological Index to Paleontological Material	" 1893
Subject Index	" 1894-end

Entered as 2nd class matter at the post office, Dec. 23, 1926, Baltimore, Maryland, under Act of Aug. 24, 1912. Published monthly during the months January to May, inclusive; bi-monthly, June to September, inclusive; monthly, October and November; semi-monthly in December.

Subscription \$25 per volume domestic and foreign, postpaid. Checks should be made payable to BIOLOGICAL ABSTRACTS.

LATEX INJECTIONS

By **TURTOX**

Latex emulsion (liquid rubber) provides an injection medium for practically all forms which so far surpasses any medium previously used that it has already made starch and gelatine masses obsolete. A few of the characteristics which have made the Turtox Latex so outstanding are:

1. It flows freely into even the smallest vessels.
2. Completely fills the vessels giving a "plumpness" not evident in other injections.
3. Sets to remain flexible and elastic.
4. Retains full, brilliant, non-fading color.
5. Will not stain or discolor surrounding tissue.
6. Not affected by formalin, alcohol or other preservatives.
7. Results equally fine in either embalmed or liquid preserved animals.
8. Provides a perfect, permanent cast of the blood vessels.
9. Permits a freedom in dissecting that brings a much more accurate understanding of the circulatory system in less than one half the time required for dissection of other specimens.

Insist on Turtox Latex injected specimens. They cost no more than poorly injected animals.



GENERAL BIOLOGICAL SUPPLY HOUSE

Incorporated

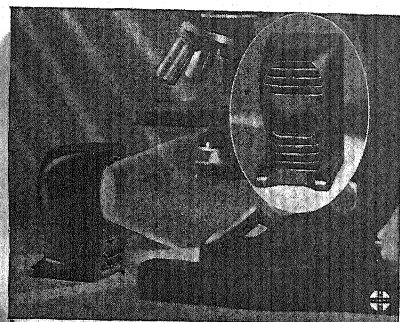
761-763 East Sixty-Ninth Place, Chicago

The Sign of the Turtox Pledges Absolute Satisfaction

Latex Injected Invertebrates

In addition to the latex injected vertebrates commonly used, the latex injected invertebrates listed below are available for immediate shipment.

Starfish
Earthworm
Leech
Crayfish
(Cambarus & Astacus)
Lobster
Grasshopper
Fulgur



New!

Operates continuously without becoming too hot to handle.

ADAMS SCOPELITE . . .

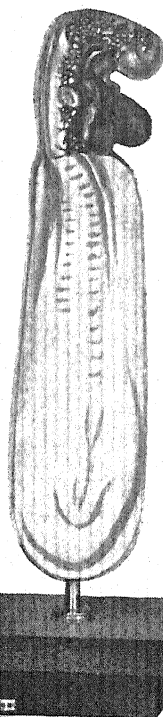
Attractively moulded of durable, almost unbreakable Bakelite, it is cool and efficient in operation. Can be used either as a substage lamp (with mirror removed) or in front of the microscope.

The louvers, front and rear, cause a free circulation of cooling air throughout the lamp without loss of light, so that even after extended use, the lamp can be handled. The frosted daylight filter diffuses the light and gives uniform illumination approximating daylight.

A-1493 ADAMS Scopelite.....each \$2.50

Write for quantity discounts

CLAY-ADAMS CO., 44 East 23rd St.
Inc. New York, N. Y.



Patten CHICK EMBRYO MODELS

★ This series consists of seven models, namely the 18, 25, 30, 36, 44, 60 and 96 hour embryos. Each model is unusually accurate in detail with blood vessels and organ rudiments exposed in relief, in many instances almost in entirety. Certain minute details are cast in metal and securely attached to the strong composition of the body resulting in models of superior strength and completeness of detail. See our catalog No. 47 for further information or write for descriptive booklet.

*Illustrated,
44 Hour Stage*

Chicago Apparatus Company

Science Laboratory Equipment
1735 NORTH ASHLAND AVENUE CHICAGO U. S. A.

In answering advertisements please mention BIOLOGICAL ABSTRACTS

BIOLOGICAL ABSTRACTS

Editor-in-Chief, JOHN E. FLYNN; Assistant Editor, JEAN MACCREIGHT

VOLUME 13

DECEMBER, 1939

NUMBER 11

Entries 18056-18108

AVES

W. L. MCATEE, *Editor*, General Ornithology

18056. BAUMGARTNER, FREDERICK M. Territory and population in the great horned owl. *Auk* 56(3): 274-282. 1939.—Field observations on the great horned owl, *Bubo virginianus*, at Lawrence, Kansas, and Ithaca, New York, demonstrated that the ♂ maintain a definite territory throughout the nesting season. This range is seldom more than $\frac{1}{2}$ mile in diam. and serves as the area in which both birds hunt for food. Resident owls are found near the nest site at all seasons of the year with the possible exception of a few months in the late summer and fall. Normally no other large species of owls are found within this territory. In optimum range the territorial requirements of the ♂ limit the density of population to 1-3 pairs to the sq. mile. The limited range of the species throughout most of the year has an important bearing upon its economic status.—F. M. Baumgartner.

18057. BORIES, P. Un jeune Martinet. *Oiseau* 9(1): 144-145. 1939.—A young Martin, accidentally fallen from its nest, refused to take food at first, and had to be force-fed. Later, it opened its bill for food. It was not afraid of men or dogs. The bird began to fly 12 days after being found.—D. S. Lehrman.

18058. CHAPIN, JAMES P. The birds of the Belgian Congo. II. *Bull. Amer. Mus. Nat. Hist.* 75(2): 1-632. 21 pl. (3 col.), 38 fig. 1939.—The present volume includes the families Rallidae to Picidae. For each species synonymy, description, and distribution are given. Keys to the larger genera are provided.

18059. DEVITT, OTTO E. The Yellow Rail breeding in Ontario. *Auk* 56(3): 238-243. 1 pl. 1939.—The Yellow Rail (*Coturnicops noveboracensis*) was found widely distributed throughout the province of Ontario, occurring in suitable marshes from Lake St. Clair on the south to James Bay. While heard occasionally during the daytime, it became much more active just after sunset. The "voice" period extended at least from May 25 to July 27. A nest containing 7 eggs was found at Holland River Marsh, Simcoe County, on June 12, 1938, and is the first reported from Canada.—O. E. Devitt.

18060. FLEMING, C. A. Birds of Chatham Islands. 3. The shore plover. *Emu* 39(1): 1-15. 6 pl. (1 col.) 1939.—*Thinornis novae-seelandiae* has been recorded from many localities throughout the main islands of New Zealand, although never in large numbers; in 1838 apparently its extinction on the mainland had already begun, and in no subsequent writing is there an account of its occurrence. So complete and so early was this extinction brought about that it is difficult if not impossible to locate, in New Zealand collections, specimens from mainland localities. In view of the large number of shore plover on South East Island it is surprising that no colonization of the nearby parts of Pitt Island has occurred. At present the shore plover may be considered as being confined to South East Island. The courtship habits of the species follow the pattern of behavior common to many waders; a few of these traits are descr. All but one of the 17 nests examined were in some way sheltered from above and entered from the sides, and contained 2 or 3 eggs. General observations, sexual differences in plumage, construction of nest, coloration of eggs, young, and ecological factors descr.—P. A. Gilbert.

18061. FRIEDMANN, H., and H. G. DEIGNAN. Notes on

some Asiatic owls of the genus *Otus*, with description of a new form. *Jour. Washington Acad. Sci.* 29(7): 287-291. 1939.—*O. senegalensis distans*, from northern Siam, related to African *O. senegalensis*; critical discussion of Asiatic forms of *O. scops*, *O. spilocephalus*, and *O. bakkamoena*.—H. Friedmann.

18062. GILBERT, P. A. The bower-painting habit of the satin bower-bird, *Ptilonorhynchus violaceus*. *Emu* 39(1): 18-22. 2 pl. 1939.—The remarkable habit of painting the sticks of the bower with fruit pulp is descr. Two fruits are specially used, the blueberry and *Dianella* berry. The methods adopted by the ♂ satin bower-bird in applying fruit pulp to the walls of its bower indicate deliberation. An immature ♂ and a ♀ also were observed to paint.—P. A. Gilbert.

18063. GROMIER, E. Quelques observations ornithologiques. *Oiseau* 9(1): 142-143. 1 fig. 1939.—Note of the finding of a nest of the yellow bunting (*Emberiza citrinella*), made of paper.—D. S. Lehrman.

18064. HALLER, L. Beobachtungen an der Tihanyer Kolonie des Fischreiher (Ardea c. cinerea L.). *Arb. Ungarisch. Biol. Forschungsinst.* 10: 45-51. 1938.

18065. HELLMAYR, CHARLES E. Catalogue of birds of the Americas and the adjacent islands. XI. *Ploceidae-Catamblyrhynchidae-Fringillidae*. *Field Mus. Nat. Hist. Publ.* 430. 13(6): 1-662. 1938.—This catalog of the family of the finches concludes the treatment of the American Passeriformes in the Field Museum series. Scientific and common names, synonymy, bibliographic references, geographic ranges, and localities of the specimens in the Field Museum are given for spp. and sspp. recognized by the author, with taxonomic descriptions in some cases. 110 genera are listed. Index. *Fringillidae: Sporophila nigricollis* *vida nom. nov.* p.209.—S. H. S.

18066. HINDWOOD, K. A. Nectar-feeding birds near Sydney. *Emu* 39(1): 40-44. 1 pl. 1939.—An annotated list of birds, chiefly honeyeaters and parrots, mostly observed feeding on the blossoms of the genus *Eucalyptus*.—P. A. Gilbert.

18067. HOMONNAY, N. Die Vögel der Halbinsel Tihany, unter besonderer Berücksichtigung der sich durch den natürlichen Aufbau der Halbinsel ergebenden Lebensräume der Vögel. *Arb. Ungarisch. Biol. Forschungsinst.* 10: 52-83. 1938.—On the basis of the breeding and feeding places of the birds, the Tihany peninsula is divided into 12 so-called bird-biochors. Each of these is composed of the various biotops of the birds. The breeding places of the various species are called their primary biotops, whereas the feeding places are the secondary ones. Each species may have several primary and secondary biotops of different importance and they may even occupy different biochors. The number of bird species observed in the peninsula was 168, of which 56 were observed breeding there.—A. Wolsky.

18068. HURSTHOUSE, E. W. Some observations on the breeding habits of the little penguin. *Emu* 39(1): 15-17. 1939.—The period of incubation was 38 days, shared by both parents. Young, methods of feeding, molt, and other aspects are dealt with, followed by a brief summary of dates and events.—P. A. Gilbert.

18069. KLEINER, A. On the importance of biotops in the bird-migration. (Observations at the waters of Trans-

danubia, Hungary.) *Arb. Ungarisch. Biol. Forschungseinst.* 10: 84-92. 1938.—Most of the water-birds insist on certain biotops, even in migration. Thus water-birds and shore-birds seem to migrate along rivers, as has been observed regularly in Gönyű on the Danube and occasionally in Szentendre, Budapest and Eresi, also on the same river. Thus the river seems to constitute a directive path of bird-migration.—A. Wolsky.

18070. LACK, DAVID. The behaviour of the robin. *Proc. Zool. Soc. London Ser. A.* 109(3): 169-219. 1939.—The elicitation of aggressive behavior in the robin is correlated with at least 4 elements in the external situation (flying-away movement, robin-shape, red breast, song), each of which tends to be associated, but not exclusively, with a particular motor behavior (pursuit-flight, striking, posturing, song). The internal state promoting aggressive behavior also seems complex.—W. E. Collinge.

18071. LEWIS, F. The breeding habits of the lowan in Victoria. *Emu* 39(1): 56-62. 1939.—A careful study of the lowan or mallee fowl, *Leipoa ocellata*, during recent years indicates that much of the usually-accepted doctrine regarding its nesting habits is faulty. The eggs when deposited in the mound always stand on the small end. Records of mound temps. and other data are valuable additions to our knowledge of the bird's life history.—P. A. Gilbert.

18072. LINDSEY, ALTON A. Food of the starling in central New York State. *Wilson Bull.* 51(3): 176-182. 1 fig. 1939.—Insects constituted 35% of the food in 661 adult (and independent young) starling stomachs, and 77% of that in 139 nestling stomachs. Vegetable matter makes up 41% in adults and 5% in nestlings, while mineral items are 0.8% and 2.2%, respectively. The remainder of the food in each case is animal matter other than insects, including millipedes, unidentified items, and animal garbage. The food habits are decidedly beneficial, especially those of nestlings.—A. A. Lindsey.

18073. LOWE, PERCY R. On the systematic position of swifts (sub-order Cypseli) and humming birds (sub-order Trochili), with special reference to their relation to the order Passeriformes. *Trans. Zool. Soc. London* 24(4): 307-348. 4 pl., 1 fig. 1939.—A series of valuable and informative notes in an attempt to once and for all establish the position held by the swifts and humming-birds in the class Aves.—W. E. Collinge.

18074. MOREAU, R. E. Numerical data on African birds' behaviour at the nest: *Hirundo s. smithii* Leach, the wire-tailed swallow. *Proc. Zool. Soc. London Ser. A.* 109(2): 109-125. 1939.—The effect of rain on parent birds' activity is given. Heavy rain reduced feeding activity. Brooding of eggs and young was carried out by the ♀♀. Incubation period is 14 days; fledging 18-21.—W. E. Collinge.

18075. NICE, MARGARET MORSE. Symposium on the individual vs. the species. 3. The Social Kumpan and the Song Sparrow. *Auk* 56(3): 255-262. 1939.—Social reactions of *Melospiza melodia* are considered from the viewpoint of Konrad Lorenz' Kumpan theory. This bird reacts to its companions through suggestion or so-called imitation, responds to warning, and exhibits despotism which is held in check in the breeding season through the factor of territory.—M. M. Nice.

18076. NOBLE, G. K. Symposium on the individual vs. the species. 4. The rôle of dominance in the social life of birds. *Auk* 56(3): 263-273. 1939.—There are 2 sharply defined types of dominance in birds: social and sexual. Sexual dominance has the same function in fish and birds. It calls forth posturing or other sexual attitudes. Territory may be sharply divided into different categories. Sexual territory, which is so characteristic of most birds, is, however, found in most egg-laying and nest-building vertebrates. It arises from the sexual interest of the animal in an area suitable for nesting and it functions primarily to test sexual readiness of the opposite sex and to make possible the formation of sexual bonds. Sexual territory is not to be confused with a nesting territory, which has a different motivational basis, nor with an isolated retreat which is defended by many vertebrates against intruders at any season.—G. K. Noble.

18077. NUBLING, E. The painting of the satin bowerbird's bower. *Emu* 39(1): 22-31. 1939.—An exhaustive ac-

count giving details of individual bowers. The first detailed account of this extraordinary habit appeared in the *American Journal of Ophthalmology*, 8(2), February, 1925. The author modifies certain statements contained in that article.—P. A. Gilbert.

18078. POLDERBOER, EMMETT B. The summer habits of the ruffed grouse in Iowa. *Iowa Bird Life* 9(3): 38-41. 1 fig. 1939.—Largely devoted to a study of the type of cover used during the July and Aug. moulting season during which the birds are flightless.—A. L. Pickens.

18079. ROSENE, WALTER JR. A preliminary investigation of the food habits of the mourning dove in Alabama. *U. S. Dept. Agric. Bur. Biol. Surv. Wildlife Res. and Manag. Leaf.* BS-133. 10p. 1939.—In the 287 mourning dove (*Zenaidura macroura*) stomachs examined, 149 spp. of vegetable food representing 41 plant families were identified, all but 3 families providing food in quantities sufficient to be recorded as one per cent or more of the bird's annual diet in Alabama. More than 99% of the food consisted of seeds. Animal food was insignificant and was probably taken accidentally. The grasses were the most important family as a source of food, the cultivated vars.—corn, wheat, and Johnson grass—ranking first as a group. The most important single native food was seeds of bull paspalum (*Paspalum boscianum*). Those of crowfoot grass (*Dactyloctenium aegyptium*) and crabgrass (*Digitaria sanguinalis*) also were important. Other seeds of importance in the diet were those of pokeweed (*Phytolacca americana*), chickweed (*Alsiue media*), wild legumes (*Galactia* and *Strophostyles*), cowpeas (*Vigna sinensis*), lespedezas (*Lepedeza*), dovewoods (*Croton*), evening-primrose (*Raimannia laciniata*), and ragweeds (*Ambrosia*). A shortage of choice foods apparently occurred in April and May. Preferred feeding places were on bare ground in open situations. The birds were found to concentrate around an abundant food supply. Preferred drinking places were at "watering holes" that had gently sloping banks, devoid of vegetation.—Auth. summ.

18080. SALGUES, R. Contributions nouvelles à la physiologie de la plume. G. La morphologie de la plume comme élément taxinomique. *Oiseau* 9(1): 51-57. 1939.—(After Chandler, U. of Calif. Pub. in Zool., 13, no. 11: 243-446, 1916.) Feather structure is a valuable taxonomic character. Distribution of plumules is not of much value, due to its variation, and to the adaptive value of the plumules. The presence and form of the hyporachis is a very significant character. The quill is not a dependable character due to its adaptiveness. The barb is a valuable character. The morphology and arrangement of the distal barbs of the flight-feathers is the best taxonomic feather-character. Contour feathers and down-barbs are not good taxonomic characters, except that the length, dimensions, and shape of the base of some of the down-barbs have phylogenetic significance. No single character can suffice as a basis of taxonomy. Evidence from the feathers leads to the following conclusions: the Procellariiformes are closely related to the Ciconiiformes; *Plotus* and *Phalacrocorax* should be in separate families; the Phoenicopteriformes are intermediate between Ciconiidae and Anseres; the Phaethontidae are closer to the Laridae than to the Steganopodidae; the Alcidae are close to the Laridae, but show some similarity to the Colymbiformes; the Gruiformes (particularly Rallidae and Aramidae) are closer to Limicolae than to Ciconiiformes; *Eurypyga* and *Cariama* are probably aberrant Ardeae; *Cursorius* is nearer to Ardeae than to Limicolae; the Pteroclo-Columbae are closer to the gallinaceous birds than to the laro-limicolines; the Tinamidae are an offshoot of the Galliformes; the Cuculiformes do not differ from Coraciiformes sufficiently to form a separate order; the Trochilidae and Pici are closer to the Passeriformes than to the Coraciiformes; the Galbulidae are not descended from Pici.—D. S. Lehrman.

18081. TICEHURST, CLAUD B. A systematic review of the genus *Phylloscopus*. (Willow-warblers or leaf-warblers.) With preface by MARTIN A. C. HINTON. viii+193p. 8 maps, 2 col. pl. Printed by order of the trustees of the British Museum: London, 1938, Pr. 10s.—This monograph is based on the collections of the British and other museums numbering 5,000 specimens and on field

experience. *Phylloscopus* has its present headquarters in the mountain ranges from Kashmir to Ransu with outlying species in Western Asia, Europe, Indo-China, and the Sunda Islands. The author recognizes 28 spp. and 53 subsp. Of these he gives a key and a systematic review and for each of them a detailed account including a terse description of the adult, molts and plumage, measurements, weights, wing formula, soft parts, breeding range, migration, winter range, comparisons with related forms in field and museum, and citations of pertinent literature. The author tends to reduce the number of genera by reducing to synonymy those founded on degrees of difference. He finds subspecies living side by side on the same ground. He notes parallel variations in allied species in comparable ranges. The book is a comprehensive, adequate, and well-considered monograph based on ample material and long experience in its analysis, with significant generalizations.—*C. A. Kofoed.*

18082. WHITLOCK, F. L. Birds of the Bunbury district, western Australia. *Emu* 39(1): 47-56. 1939.—An annotated list of birds based on observations over 10 yrs. or more.—*P. A. Gilbert.*

18083. WRIGHT, EARL G. Marking birds by imping feathers. *Jour. Wildlife Management* 3(3): 238-239. 1 fig. 1939.—Feathers of any color can be firmly attached to bases

of natural feathers by splicing with metal reinforcement.—*W. L. McAtee.*

18084. WYNNE-EDWARDS, V. C. Intermittent breeding of the Fulmar (*Fulmarus glacialis* (L.)) with some general observations on non-breeding in sea-birds. *Proc. Zool. Soc. London Ser. A.* 109(2): 127-132. 1 pl. 1939.—There is a large non-breeding population of Fulmars and other Procellariiform birds, which suggests that they do not breed annually. In non-breeding Fulmars obtained in northern Labrador in July the length of the middle claws varied from 16 to 10.6 mm., due to wear. As pelagic birds, can only wear down their claws when breeding, this observation strongly suggests a non-breeding population of mixed age-groups. Ovaries from 4 representative non-breeding ♀♀ were sectioned, and histological confirmation obtained of the relation of claw-length to age. Resorbed remnants of ovulated follicles prove that all these birds had bred in one or many previous years, and thus that their reproduction is intermittent. A case of follicular atresia accompanied by the extrusion of yolk into the stroma is figured. When breeding is inhibited in the Fulmar and certain other birds the annual (post-nuptial) moult occurs prematurely. A short discussion is given of other effects of inhibited breeding in marine birds.—*W. E. Collinge.*

MAMMALIA

Editor: GERRIT S. MILLER. Associate Editor: REMINGTON KELLOGG

18085. ALLEN, GLOVER M. Dog skulls from Uyak Bay, Kodiak Island. *Jour. Mammal.* 20(3): 336-340. 1939.—From an aboriginal site of 4 acres, covered by a deposit believed to date from about the beginning of the Christian era to about the time of Russian occupation (1783), some 30 crania and mandibles were recovered during the excavations under Dr. Ales Hrdlička, representing 2 distinct breeds of dogs, a larger about the size of the Eskimo dog of Greenland, but with a more pinched-in rostrum, and a much smaller breed about the size of a spaniel but differing from most smaller types of dogs in the flatter forehead and nearly complete lack of swellings due to sinusal inflation of the portion between postorbital processes and braincase. A few skulls probably represent mongrels of these two, with disharmonic proportions. Measurements of 29 skulls of this lot are given.—*G. M. Allen.*

18086. BAILEY, VERNON. The solitary lives of two little pocket mice. *Jour. Mammal.* 20(3): 325-328. 1939.—These smallest known pocket mice (*Perognathus pacificus*) are fairly abundant in the sandy shores and dunes near the ocean in San Diego Co., southern California, but have not been found in the heavy soils a little back from the beaches. A ♂ and ♀ were captured near Oceanside in 1931 and kept for study until they died of old age, the ♀ in 1935 and the ♂ in 1937. They were fully adult when captured and must have been at least 5 and 7 years old when they died. Their habits in the field and in captivity were mainly solitary as in most animals that store food, the ♀ being aggressively acquisitive, though both were gentle and friendly with people. Their food consisted of a great variety of seeds of native and cultivated plants of which the families Compositae, Leguminosae and Gramineae furnished the staples. They drank water irregularly but became very thirsty if without water or green food for a few days.—*V. Bailey.*

18087. BEACH, FRANK A. Maternal behavior of the pouchless marsupial, *Marmosa cinerea*. *Jour. Mammal.* 20(3): 315-322. 3 fig. 1939.—A lactating opossum exhibited maternal reactions comparable to those of the parturient rat; she gathered available material to build a nest, and retrieved her scattered young by pushing them under her belly where they could seize the ventral hair and cling to the mammae. Her reactions to the newborn rats were indistinguishable from her responses to her own young; but the rats failed to seize her coat and consequently were not retrieved. Young rats left in the exptl. cage over night were found in her nest box the following morning.—*F. A. Beach.*

18088. BENSON, SETH B., and RICHARD M. BOND. Notes on *Sorex merriami* Dobson. *Jour. Mammal.* 20(3):

348-351. 1939.—This shrew occurs in California. It intergrades with *S. leucogenys*, thus reducing *leucogenys* to the rank of a subspecies of *S. merriami*.—*S. B. Benson.*

18089. CARR, A. F. Jr. Notes on escape behavior in the Florida marsh rabbit. *Jour. Mammal.* 20(3): 322-325. 1939.—Observations on some 200 chases of a small number of Florida marsh rabbits (*Sylvilagus palustris paludicola*) by hounds, in the same area near Newnan's Lake, Florida, in which Blair's 1936 study of the Florida marsh rabbit was made, show that (1) the pursued rabbits are unhurried, moving with a short hop, and often back-tracking or "freezing," allowing the hounds to overrun the trail; (2) what are believed to be single individuals with some regularity follow predictable courses leading to preselected refuges, but the routes taken are not invariable.—*T. H. Hubbell.*

18090. COTTAM, CLARENCE, A. L. NELSON, and TALBOT E. CLARKE. Notes on early winter food habits of the black bear in George Washington National Forest. *Jour. Mammal.* 20(3): 310-314. 1939.—A discussion of early winter food habits of black bears in George Washington National Forest, Virginia and West Virginia, based on examination of the stomach contents of 25 animals. Acorns and fruits of *Vaccinium*, tupelo (*Nyssa sylvatica*), grape, chokeberry (*Aronia melanocarpa*) and greenbrier (*Smilax*) were found to be the chief items of food. During the early winter, only 3½% of the food consumed was of animal material. During years of acorn failure the bears are forced to feed on fruits to a much greater extent than usual.—*A. L. Nelson.*

18091. DEARBORN, NED. Sections aid in identifying hair. *Jour. Mammal.* 20(3): 346-348. 1939.—Cross sections of mammal guard hairs, made where the hairs are broadest, are frequently distinctive of a family, or even a genus. The medullary pattern and the maximum size of a guard hair are also more or less diagnostic, when taken in connection with cross sections. These features are useful in identifying small mammal hairs found in stomachs and excreta of predators.—*N. Dearborn.*

18092. FOX, E. H. Some notes on rat control in the Mourilyan area. *Queensland Soc. Sugar Cane Technol. Proc.* 8: 37-39. 1937.—Over 90% of the field rats in the Mourilyan area of Queensland belong to the species *Melomys littoralis*.—*Courtesy Exp. Sta. Rec.*

18093. FRY, DONALD H. Jr. A winter influx of sea lions from Lower California. *California Fish and Game* 25(3): 245-250. 3 fig. 1939.—Sea lions can be counted most easily and accurately during the breeding season (early summer); therefore all previous counts in California were made at that time. To check the possibility of a winter influx of sea

lions from Mexican waters, a count was made in early March, 1939. Approximately twice as many California sea lions (*Zalophus californianus*) were found as on summer counts.—D. H. Fry, Jr.

18094. GAZIN, C. LEWIS. A further contribution to the Dragon Paleocene fauna of central Utah. *Jour. Washington Acad. Sci.* 29(7): 273-286. 10 fig. 1939.—A description of the fossil mammalian remains collected from the Dragon Paleocene deposits in central Utah by the 1938 Smithsonian Institution expedition in search of fossil vertebrates. The fossil localities are in or near Dragon Canyon in the western part of Emery County. The fauna now includes about 19 mammalian forms of which 9 are recognized as new species. Three new genera are proposed as follows: CONORYCTELLA (Taeniodonta); DRACOCCLAENUS and JEPSENIA (Condylarthra). New species are described in *Catopsalis*, *Conoryctella*, *Anisonchus*, *Haplocomus*, *Dracoclaenus*, *Ellipsodon*, and *Jepsenia*.—C. L. Gazin.

18095. GOLDMAN, E. A. A new badger from Sonora. *Jour. Washington Acad. Sci.* 29(7): 300-301. 1939.—*Taxidea taxus sonoriensis*.—E. A. Goldman.

18096. GOLDMAN, E. A. Nine new mammals from islands in Great Salt Lake, Utah. *Jour. Mammal.* 20(3): 351-357. 1939.—New subsp. in *Perognathus* (1), *Dipodomys* (3). *Onychomys* (1), *Reithrodontomys* (1), *Peromyscus* (2), and *Neotoma* (1).

18097. GREGORY, JOSEPH T. Two new camels from the late Lower Pliocene of South Dakota. *Jour. Mammal.* 20(3): 366-368. 1 fig. 1939.—*Phanachenia magnifontis* and *Procamelus grandis*.

18098. HAMILTON, W. J. Jr. Activity of Brewer's mole (*Parascalops breweri*). *Jour. Mammal.* 20(3): 307-310. 1939.—In studies conducted in eastern New York during the summers of 1937 and 1938, surface burrows were marked by pressing in the roof of mole tunnels; observations on the time at which 973 repairs were made through the 24-hour period suggest that these moles are more active by day than at night. Records of 1383 repairs between 6 a.m. and 6 p.m. do not show rhythmic activity as is manifested in *Microtus* and *Peromyscus*.—W. J. Hamilton, Jr.

18099. HAMLETT, G. W. D. Identity of *Dasypus septemcinctus* Linnaeus with notes on some related species. *Jour. Mammal.* 20(3): 328-336. 1 fig. 1939.—The Linnaean species *D. septemcinctus* is identical with a small, widely distributed Brazilian armadillo that has been described under various other names. *D. hybridus*, of Argentina, is a distinct species. A key to the genus and condensed synonymies are given.—G. W. D. Hamlett.

18100. HOWELL, ARTHUR H. Description of five new mammals from Florida. *Jour. Mammal.* 20(3): 363-365. 1939.—New subsp. in *Scalopus* (1), *Peromyscus* (3), and *Sylvilagus* (1).

18101. HUESTIS, R. R. Crater Lake *Peromyscus*. *Jour. Mammal.* 20(3): 341-345. Map. 1939.—Mice taken on the Cascade Divide at Crater Lake are intermediate between *Peromyscus maniculatus rubidus* and *P. m. gambeli* in pelage characters based on hair count. In mean relative tail length the Cascade Divide sample lies between the means for this character in the *rubidus* and *gambeli* series used for comparison but is much nearer the latter race. In foot and ear length Cascade Divide mice are indistinguishable from *gambeli* and only slightly different from *rubidus*. The point of intergradation is different in the various characters used by taxonomists to separate geographic races. With the exception of a small difference in relative tail length *Peromyscus* taken at 3 points in Crater Lake National Park are similar to one another.—Auth. summ.

18102. HUEY, LAURENCE M. A new *Perognathus* arenarius from near the U. S.-Mexican boundary in Lower California. *Trans. San Diego Soc. Nat. Hist.* 9(13): 57-58. 1939.—*P. arenarius mexicanus*, northern Lower California, Mexico.—L. M. Huey.

18103. HUEY, LAURENCE M. The silky pocket mice of southern California and northern Lower California, Mexico, with the description of a new race. *Trans. San Diego Soc. Nat. Hist.* 9(11): 47-54. Map. 1939.—Reviews the small silky pocket mice in southern California (south of the Sierra Madre range) and northern Lower California, Mexico.

Perognathus longimembris internationalis, Lower California side of International Boundary at Jacumba, San Diego County, California. *P. l. cantwelli* is reduced to synonymy with *P. l. pacificus*.—L. M. Huey.

18104. HUEY, LAURENCE M. A new silky pocket mouse from southwestern Utah. *Trans. San Diego Soc. Nat. Hist.* 9(12): 55-56. 1939.—*Perognathus longimembris virginis*, Washington County, Utah.

18105. MILLER, GERRIT S. Jr., et al. Note on the lectotype of *Lasiurus semotus* (H. Allen). *Jour. Mammal.* 20(3): 369-382. 1 fig. 1939.—Note on the lectotype of *Lasiurus semotus* (H. Allen), by GERRIT S. MILLER, JR.; Notes on the sex ratio in *Nycticeius humeralis*, by EMMET T. HOOPER; The leconte free-tailed bat *Tadarida cynocephala* in Alabama, by FRED S. BARKALOW, JR.; Notes on an otter fishing, by LAURENCE H. SMITH; Swimming power of the Canadian otter, by W. E. SCOTT; Sea otters and abalones, by JOHN E. CUSHING, JR.; Coyotes prey on goats, by ALBERT C. HAWBRECKER; Dental anomaly in an Eskimo dog, by GLOVER M. ALLEN; A weasel [*Mustela frenata noveboracensis*] trails a rabbit [*Sylvilagus* sp.], by EDWARD ADDY; Badgers in northeastern Missouri and southeastern Iowa, by RUDOLF BENNITT; Climbing ability of the northeastern chipmunk, by NORMAN A. PREBLE; Observations on red squirrel [*Tamiasciurus hudsonicus*] travel in treadmill, by ADRIAN C. FOX; Occurrence of the bushy-tailed woodrat (*Neotoma cinerea*) at Fresno, California, by DOUGLASS H. HUBBARD; A swimming and diving meadow vole (*Microtus pennsylvanicus pennsylvanicus*), by W. FRANK BLAIR; Meadow mouse (*Microtus pennsylvanicus*) trapped by plant stalks, by C. HAVEN KOLB; Northern pine mouse (*Peromyscus pinetorum*) in Minnesota, by DONALD M. HATFIELD; Notes on the house mice of California, by DAVID G. NICHOLS; The dusky pocket mouse (*Perognathus flavescens perniger* Osgood) in Iowa, by EDSON FICHTER; Re-assimilation of food by the banner-tail kangaroo rats (*Dipodomys spectabilis baileyi*), by F. W. MILLER; Attacks on porcupine by gray fox (*Urocyon cinereoargenteus*) and wildcats (*Lynx rufus*), by RICHARD LEE WEAVER; Notes on the Sierra Nevada flying squirrel (*Glaucomys sabrinus lascivus*), by VINCENT MOWBRAY; The hand capture of conies (*Ochotona*), by F. W. MILLER, and Highway mortality of rabbits in Idaho (Anonymous).

18106. SHADLE, ALBERT R., and THOMAS S. AUSTIN. Fifteen months of beaver work in Allegany State Park, N. Y. *Jour. Mammal.* 20(3): 299-303. 1 fig. 1939.—In one year 2 adult beavers cut 116 trees from 1 to 13 inches in diam., built 705 feet of dam, and constructed a house of 472 cu. ft. volume. From Aug. 11, to Nov. 11, 1938, the adults and 2 kits cut 150 trees 1 to 15 inches in diam., added 150 feet of dam, besides raising other dams, increased the volume of the house from 472 cu. ft. to 940 cu. ft., collected and stored a pile of winter food 30 feet long, 8 ft. wide and 3 to 4 feet deep. The order of food preference was: *Populus*, *Salix*, *Amelanchier*, *Carpinus*, and *Prunus*.—A. R. Shadle.

18107. WARREN, EDWARD R., and E. RAYMOND HALL. A new subspecies of beaver from Colorado. *Jour. Mammal.* 20(3): 358-362. Map. 1939.—*Castor canadensis concisor* is described; Monument Creek, El Paso County, Colorado, is the type locality.—E. R. Hall.

18108. WOOD, ALBERT ELMER. Additional specimens of the heteromyid rodent *Heliscomys* from the Oligocene of Nebraska. *Amer. Jour. Sci.* 237(8): 550-561. 2 pl. 1939.—A collection of specimens of *Heliscomys* from the Upper Oread Beds of western Nebraska adds considerably to our knowledge of this rodent. Associated upper and lower teeth, complete upper and lower dentitions, fragments of the skull, a partial radius and a partial manus, all referable to *H. hatcheri*, make this the best known species of the genus. This species shows strong resemblances to the early members of the Heteromyinae, to which it is tentatively referred, although all the other species of the genus are referable either to the Perognathinae or to the Dipodominae. This material throws no light on the origin either of the *Heliscomys* tooth pattern, or on that of the Geomyoidea in general.—A. E. Wood.

INTRODUCTORY GUIDE TO THE INDEXES

Users of Biological Abstracts are reminded that this volume covers only a part of the literature published in the period during which the volume was issued. Succeeding volumes must therefore also be consulted for literature more or less contemporaneous with that reported and indexed in this volume.

SUBJECT AND SYSTEMATIC INDEXES

GENERAL

These indexes are designed to meet the needs both of those whose interests lie chiefly in systematic groups of organisms and of those whose interests are not circumscribed in this way. For the former, chiefly systematic biologists, one of the requisite avenues of approach to their subject is by systematic groups; this is provided by the systematic index. Experience has shown that the needs of those concerned with other biological disciplines are most practically met by a detailed analytical subject index alphabetically arranged; an extensive index of this type is therefore provided.

A special effort has been made to design these two indexes as far as possible in such a way that they will complement rather than duplicate each other. Certain departures from standard indexes will therefore be noted. Chief among these is the policy in the systematic index of carrying the indexing only to genera, not to species.

This arrangement will be convenient for systematists as well, especially when seeking information concerning a limited number of given genera; under these circumstances the subject index will be found the more satisfactory, making consultation of the systematic index in such cases unnecessary. When, however, more comprehensive and extended systematic orientation is desired, the systematic index provides a complete condensed approach by groups and their subgroups down to and including genera.

THE SUBJECT INDEX

(p. 1894 to end)

This index is based upon an analysis of the abstract, not merely the title.

The words, terms, and expressions currently used for the same or closely related subjects vary greatly. If the indexing is done according to the particular words used by authors, much scattering of material concerning the same subject obviously results. Therefore the effort has been to index subjects and not merely words, and, where necessary, provide cross references which will lead the user from words commonly used to the rubrics under which the pertinent material has been assembled. Thus, studies on blood sugar are indexed under that rubric, not under "Hypoglycemia," "Hyperglycemia," or other terms used by authors to denote variations in blood sugar; because of their frequent use, however, "Hypoglycemia," "Hyperglycemia," etc., are entered in their respective alphabetic positions with cross references to "Blood sugar." Similarly, word indexing frequently scatters material referring to the same species; thus, material concerning the domestic fowl would appear under such diverse rubrics as hen, cock, pullet, capon, fowl, chicken, chick, etc.

While an effort has been made through subject indexing to avoid in a large measure the scattering resulting from word indexing, the index is, in the main, not a classified one. Since ease of use rather than strict logic is demanded of an index, the indexing so far as possible is done under the rubrics under which it is thought the majority of users are most likely to search. To this extent the index is

frankly opportunistic. Thus the index contains rubrics for "Antibodies," "Antigens," "Complement," "Toxins," "Vaccines," etc., instead of relegating all to subordinate positions under some general rubric, *e.g.*, "Immunity." Since individual researches tend to be highly specialized, this general policy is believed to result usually in greater convenience to investigators.

This policy necessarily places closely related subjects in more or less widely separated alphabetical positions, and since the index should be useful not only to the specialist but also to those who wish a more comprehensive orientation in a wider field, cross references have been liberally employed to lead users to related material. Also, when the nature of the material has made it possible, the information has not only been entered under, for instance, the specific name of the substance, but has been listed again under the class or group to which it belongs. For example, the papers which deal with cyanides as fumigants appear with detailed entries under "Cyanides," as: "Cyanides, as fumigants, in black scale control, . . . 14980," and are listed again, by number only, under "Fumigants," as: "Fumigants, cyanides as, . . . 14980." Similarly, papers on specific stains are entered in detail under the name of the stain, *e.g.*, "Methylene blue," etc., and listed again by number only under "Stains." Cyanides and methylene blue cannot, however, be made exclusively subrubrics of "Fumigants" and "Stains," respectively, because of their importance in other directions.

There are some cases, however, in which there seems to be no necessity for thus scattering related material; especially in cases where there is an anatomical basis for grouping, material has been entered only under the larger group heading. Thus the bones, muscles, nerves, and the various parts of the brain are listed under "Bone," "Muscle," "Nerve," "Brain," rather than under "Ulna," "Sartorius," "Phrenic," "Amygdala," "Restiform body," etc.

Under very broad rubrics only those papers are in general indexed which themselves are broad in content or point of view. Thus, under "Physiology," "Pathology," "Cytology," "Horticulture," "Ecology," etc., will usually be found indexed only books or other general treatments; to do otherwise would make these headings unwieldy and more or less coextensive with the corresponding abstract sections.

Indexing under names of organisms

In general, indexing is done under the scientific name used in the original; *i.e.*, no attempt is made to select the name that might be considered correct under the rules where two or more names are in current use. This results in some scattering of references pertaining to the same organism, notably among bacteria, where several systems of nomenclature are current. However, specialists will know what names to consult in such cases; also, a limited amount of cross referencing is provided.

When common names only are used in the original, the indexing as a rule is done under these; allocation to genera would in many cases be difficult and introduce errors. Thus, if merely "Clover" appears in the original, it

INTRODUCTORY GUIDE TO INDEXES

is indexed under that name rather than under the genus *Trifolium*, since the plant in question may belong to some other of the several genera members of which are known as "Clovers." Where, however, there is no room for doubt as to the proper scientific name of an organism or group mentioned only by common name in the original, indexing may be done under the scientific name. Between common names and their possible, probable, or certain corresponding generic names, cross references have been provided in a limited number of cases.

Since the same generic name is sometimes used for both plants and animals, the alphabetical arrangement used in the subject index throws these together. In most cases these have been separated. Occasionally, however, the species listed under a generic name will be in part animal and in part plant; reference to the corresponding abstracts at once distinguishes between them.

Studies, especially experimental, on common laboratory animals (guinea pig, mouse, rat, rabbit, dog, cat, etc.) are in general not indexed under the name of the animal; the same applies to man, especially in the fields of physiology, pathology, and anatomy.

In view of the extensive systematic index, the indexing in the subject index is usually not done under group names above the rank of genus. Occasionally it appears desirable to insert references under larger group names, often in anglicized form, e.g., "Diatoms," "Fishes," etc. However, every supergeneric group recognized and represented in the systematic index appears in the subject index in Roman type; the page number following refers to the page of the systematic index on which the group is treated, and the exponential figure attached to the page number refers to the column.

Similarly, the page and column references appearing after generic names refer to the exact places in the systematic index where these genera are treated systematically. *It is thus possible to determine instantly the classification of any genus occurring in the alphabetical subject index which appears also in the systematic index.* For example, the genus *Anopheles* in the alphabetic subject index is followed by "(p. 1877³)"; reference to this page and column in the systematic index discloses that the genus falls in the family Culicidae, order Diptera, class Insecta.

Through the policies outlined in the two paragraphs preceding it is apparent that *the subject index provides at the same time a complete alphabetical index to the systematic index.* It is thus possible for users of the alphabetical subject index to orient themselves systematically as to both genera and supergeneric groups, thereby facilitating the utilization of systematic information—especially by those who find it difficult to do so when only a systematic approach is available. Furthermore, the user is at once put in touch with related genera and groups and the information recorded concerning them, thereby simplifying the problem of approaching a special problem against a background of broad orientation.

Typography

All generic names are in *italic type* (the only exceptions are new genera and subgenera, which appear in bold-faced capitals); all other first words in rubrics are in ordinary Roman type. This will be found convenient: if the search is for a generic name, all roman type rubrics can be ignored; if the search is for any other subject rubric, all italic names can be passed by automatically.

New genera and subgenera are printed in bold-faced capitals, e.g., **ARENIGOBUS**. Categories below the rank of genus are not indexed in first position, the sole exception being new subgenera.

For reasons of economy the indexing of new taxonomic units below the rank of genus has been greatly curtailed. We have endeavored to lead the user to the desired information in the abstract without duplicating that information in the indexes. Only a few of the new species, varieties, forms, combinations, and reductions to synonymy have been mentioned specifically in the index. If mentioned they are printed as follows:

New species, varieties, etc., appear in lower-case bold-faced type, e.g., *Anopheles broussesi*, *Carex capillaris* v. *parvirostris*.

New specific, varietal, etc., names proposed to replace preoccupied names are printed in lower-case bold-faced type, with the replaced combination following in parentheses and in italic; e.g., *Bitoma novella* (*B. maura*). If the preoccupation is the result of transferring a species from one genus to another, thus involving two generic names, the replaced binomial is also entered in first position, in italic, followed in parentheses by the new binomial (the new name appearing in lower-case bold face); e.g., *Corixa dubia* (*Sigara paivai*).

In *new combinations* (e.g., transfers of members from one genus to another), the specific name appears in lower-case bold-faced type, followed in parentheses and in italic by the genus from which the member is transferred; e.g., *Anneslia anomala* (*Inga*). The old combination is also entered in first position, but wholly in italic, followed in parentheses and in italic by the genus to which the transfer is made: *Inga anomala* (*Anneslia*). If in making the transfer any change in specific, varietal, etc., names is made, the full combinations are given.

In the abstracts *new synonyms* are preceded by an equality sign and placed in parentheses; the name under which the synonym is sunk precedes, e.g., *Sympronoe parva* (Claus) (= *S. anomala* Shoemaker).

A dagger (†) associated with a plant or animal name indicates that it is a *fossil*. The abbreviations in parentheses signify *geological periods*, as follows:

(Cb) = Carboniferous	(N) = Neogene
(Cm) = Cambrian	(O) = Ordovician
(D) = Devonian	(Pl) = Pleistocene
(E) = Eocene	(Pr) = Permian
(J) = Jurassic	(S) = Silurian
(K) = Cretaceous	(Tr) = Triassic

Some necessary variations from the above will be self-explanatory.

In the abstracts an asterisk (*) attached to a name indicates that the form is illustrated.

THE SYSTEMATIC INDEX

(pp. 1860-1883)

The indexing in the systematic index is limited to those disciplines in which the interest is more or less strongly by systematic groups, notably the taxonomic and morphological. The indexing is confined at present to the following subjects, the references being grouped correspondingly under the abbreviations given in parentheses:

Morphology, including anatomy (MORPH.)	Life History (L. H.)
Histology (HIST.)	Phylogeny (PHYL.)
Cytology (CYT.)	Geographical distribution (DIST.)
Embryology (EMB.)	Bibliography (BIBL.)
	Taxonomy (TAX.)

In departure from the policy of previous years, all taxonomic information, of whatever character—including the description of new species, subspecies, varieties, forms, aberrations, etc., and the publication of new names, new combinations, and new reductions to synonymy (but not including the erection of new genera or of supergeneric groups)—is assembled under the category TAX.

Superspecific entities (subgenera, genera, and higher groups) proposed as new to science are listed by name in bold-faced capitals, e.g., **NOBOLIRA**. New genera appear in alphabetic order among the other genera of the particular group; new subgenera are indented under the corresponding genera; in new supergeneric groups the exact position of the names varies somewhat, depending upon the rank of the group and whether the name is merely indexed or whether utilized by the editor for arranging subordinate groups under it. All new superspecific group names, except genera, are accompanied by a statement of

INTRODUCTORY GUIDE TO INDEXES

the rank assigned to them by the authors, *e.g.*, n. subg., n. ord., etc.

Certain *fossil genera* of very doubtful position, or form genera of broad scope, are omitted from the systematic index; they are, however, included in the subject index.

Geographical distribution (DIST.) is in general entered in the systematic index only when treated more or less comprehensively or when data of apparently peculiar interest are presented. Some variation in this policy will be noted. Geographical distribution is, however, indexed fully by groups under geographical and political units in the Geographical Index (see below). This, it is believed, will be found useful because the interest in much recorded distributional information is local. However, by consulting the Geographical Index the student desiring more exhaustive information regarding distribution will be able to assemble easily the desired references.

Papers treating a group (family, order, etc.) more or less comprehensively from some point of view (morphology, taxonomy, cytology, etc.) are frequently indexed under the broader group, though they may also be entered under

individual genera. However, new species, new varieties, new combinations, etc., are invariably referred to under the genera.

Genera are arranged alphabetically under groups, and are therefore easily located. If, on the other hand, the systematic index is consulted for subjects—cytology, embryology, life history, etc.—the distinctive type used for the abbreviations renders the assembling of references from this point of view almost equally simple.

The *systems of classification* used in the various groups are determined by the editors in charge of the respective sections. In general the policy is to use conservative modern classifications; also, to omit intermediate groups, especially subfamilies (a few large families in Lepidoptera being the only exceptions). Since the purpose of the systems here used is chiefly to facilitate the location of desired information, it is believed that the omission of these taxonomic refinements will contribute to, rather than detract from, the utility of the index; furthermore, these refinements are more likely to be fluctuating and controversial, involving changes in successive volumes confusing to the user of the indexes.

GEOGRAPHICAL AND GEOLOGICAL INDEXES

THE GEOGRAPHICAL INDEX

(pp. 1884-1892)

This index is devoted to the indexing of geographical information, particularly the geographical distribution of organisms.

The various geographical areas adopted as units for indexing purposes are grouped under the following major headings: North America, South America, Europe, Africa, Asia, Malay Archipelago, Australasia, Antarctica, Oceanic Islands, and Oceans. The arrangement of the areas under each of these major headings is alphabetical except in the case of North America, where the countries are arranged in a general north-to-south sequence. The subdivisions of any country, such as the provinces of Canada or the separate states of the United States, are arranged alphabetically under that country.

Under each geographical area or unit, organisms are listed by group names arranged alphabetically and corresponding approximately to the systematic sections of current abstract issues; *e.g.*, "Coleoptera," "Fungi," "Mammalia," etc. Items of information pertaining to geographical distribution, but not readily classifiable by systematic groups, are entered in the index above the systematic group names.

A limited amount of indexing is done under the larger geographical units (*e.g.*, West Indies; Europe; Africa, northern), either because the papers in question treat the area more or less comprehensively or because the locality data are not sufficiently specific in the original to permit of more circumscribed allocation.

The names of all geographical areas or units adopted for indexing purposes are printed in their proper places in this index. A few, however, are followed by no abstract numbers; this indicates that the current volume contains no material for indexing under those names.

For indexing purposes, it is a general policy to include coastal islands with near-by mainland countries rather than with oceanic island groups. Likewise coastal waters, up to the 100-fathom line, are generally included with the adjoining mainland. Oceans include adjoining gulfs, bays, and smaller seas. For the most part, only aquatic organisms are indexed under oceans. For abstracts dealing with organisms of a certain kind of distribution, such as coastal fishes (Pisces) or pelagic birds (Aves), references may be given both under an ocean and under a land area.

A dagger (†) preceding an abstract number indicates that the abstract deals with a fossil organism or organisms.

Various letter symbols in parentheses signify *geological periods*, as follows:

(Cb)	= Carboniferous	(N)	= Neogene
(Cm)	= Cambrian	(O)	= Ordovician
(D)	= Devonian	(Pl)	= Pleistocene
(E)	= Eocene	(Pr)	= Permian
(J)	= Jurassic	(S)	= Silurian
(K)	= Cretaceous	(Tr)	= Triassic

Additional information on the distribution of organisms, as far as it pertains to the geological occurrence of fossil species, is indexed in the Geological Index under the names of the geological periods, on page 1893.

Abstract numbers in bold-faced type indicate that new taxonomic concepts (e.g., new species or subspecies) are proposed in the papers referred to.

THE GEOLOGICAL INDEX TO PALEONTOLOGICAL MATERIAL

(p. 1893)

This index is devoted to the indexing of paleontological information on the basis of the geological time scale. The sequence progresses from older to younger strata by eras and periods. Under each period organisms are listed by group names arranged alphabetically and corresponding approximately to the systematic sections of current abstract issues, *e.g.*, "Crustacea," "Gymnospermae," "Mammalia," etc.; the only important exception is represented by "Insecta," the orders of which are not separated. For a detailed systematic approach to paleontological material the Systematic Index (pp. 1860-1883) should be consulted.

A limited amount of indexing is done under the eras, either because the papers in question are more or less comprehensive or because the geological data are not sufficiently specific in the original to permit of allocation to periods.

In general, geographical locations are not included; for a geographical approach to paleontological material, the Geographical Index (pp. 1884-1892) should be consulted.

For an alphabetical approach to fossil forms, the Subject Index (p. 1894 to end) should be consulted.

Abstract numbers in bold-faced type indicate that new taxonomic concepts (e.g., new species or subspecies) are proposed in the papers referred to.

AUTHOR INDEX

A

- Aaltonen, K. E., 16448
 Aaltonen, V. T., 15621, 15622
 Aamodt, O. S., 1173, 1177
 Aandrewartha, H. V., 3867
 Abarbanel, A. R., 3899, 7547
 Abaskin, B., 8484
 Abbate, R., 16752
 16766, 16767
 Abbayes, H. des, 1086
 1087, 1088, 17544
 Abbe, L. B., 15517
 Abbie, A. A., 668, 4326
 Abbott, E. v., 12132
 12159, 17775
 Abbott, O. D., 10879
 Abboud, M. A., 2348
 Abdel-el-Malek, S., 16586
 Abdel-Khalik, A. K., 8220
 Abderhalden, E., 5438
 5439, 5440, 5441
 5442, 5443, 5444
 5798, 12488, 12498
 Abderhalden, R., 5439
 5440, 5443, 9826
 Abdon, N. O., 400
 401, 402, 1950
 Abegg, F. A., 6477
 Abel, G., 3277
 Abel, J. J., 1682
 6174, 17116
 Aberbanel, A. R., 9862
 Aberg, E., 2829
 Aberle, S. B. D., 15343
 Abernathy, T. J., 17328
 Abraham, E. P., 10849, 11146
 4122
 Abrahams, A. R., 4122
 Abrahamson, E. M., 7287, 12712
 Abramowitz, A. A., 403, 11078
 Abramowitz, M., 1781
 Abrams, E., 10506
 Abramson, D. L., 2300
 7700, 7701
 9406, 12643
 Abramson, H. A., 7329
 10838, 13890
 14783, 15128
 Abrard, R., 12240
 Abribat, M., 16388
 Abt, A. F., 325
 Achelis, J. D., 12772
 Ackermann, D., 261
 12800, 12801
 Ackerson, C. W., 15111
 Ackert, J. E., 6127
 Ackroyd, O. E., 2438
 Acree, E. G., 6146, 11549
 Acervo, C., 12423
 Acuña, R. A., 8518
 Aczel, M., 10593, 10599
 10600, 18000
 Adair, F. L., 11112
 Adair, M. E., 17117
 Adam, A. B., 8859
 Adam, D. B., 1445
 Adam, R., 17167
 Adam, J., 8310
 Adam, E., 507
 Adams, A. E., 374
 Adams, C. N., 2028
 Adams, O. O., 467
 Adams, H. R., 15583
 Adams, J. E., 10064
 Adams, J. E., 1185, 13814
 Adams, J. M., 569
 Adams, M. H., 8554, 4948
 Adams, W. E., 3456, 3777
 Adamska, H., 9410
 Adamson, A. M., 10765, 14237
 Adamson, D. C. M., 301
 Adamson, M. A., 15803
 Adamson, R. S., 16133
 Adati, T., 7283
 Addicott, F. T., 15734, 17706
 Addis, T., 7465, 7598
 9186, 12643
 Addy, E., 18105
 Adelman, M., 16960
 Adensamer, W., 7182, 12309
 Ades, H., 12643
 Ades, H. W., 4007
 Adler, A., 7944
 Adler, E., 7259, 14446
 Adler, S., 14156
 Adler-Mönnich, J., 11404
 Adlersberg, D., 9187, 14954
 Adloff, 7980
 Adolph, E. F., 3871
 Adolph, W., 12792
 Adolph, W. H., 2034
 9162, 12860, 14517
 Adra, C., 13447
 Adrain, E. D., 2196, 13068
 Adriaens, L., 12016
 Adrianopoulos, A., 18006
 Adson, A. W., 16828
 Aeschbacher, R., 3904
 Afendulis, T. C., 3753
 Affy, A., 5285
 Afridi, M. K., 12210
 12244, 12358
 Agar, W. E., 5255
 Agati, J. A., 17800
 Agduhr, E., 12929
 Aggeler, P. M., 3641
 Aggér, M., 6355
 Agharkar, S. P., 2787
 Agner, K., 184
 Agranat, A. L., 8174
 Agren, G., 3786
 5825, 7260
 Aguilar, L., 1282, 8542
 15623, 17643
 Ahi, S. M., 1045, 4935
 Ahi, E., 6947
 8808, 8820
 Ahlberg, N., 10880
 Ahlgren, G., 7673
 Ahlgren, H. L., 1173
 Ahmad, B., 5518
 Ahmann, C. F., 10879
 Aicher, L. C., 15095
 Aikman, J. M., 3500
 Ainsworth, G. C., 1434
 Aird, I., 9139
 Airlis, K., 16683
 Airy-Shaw, H. K., 11873A
 Aisenberg, M. S., 4347
 Aitken, T., 6751
 Aitken, T. H. G., 3278
 12359, 14138
 Ajazzi Mancini, M., 16753
 Ajroldi, P., 12142, 17796
 Ajuriaguerra, de, 2229
 Ajuriaguerra, J., 7650
 Akai, S., 10367, 15341
 Akashi, S., 10073, 12113
 Akerhielm, L., 8519, 13921
 Akerman, A., 8452
 Akhtar, S. A., 11874
 Akita, T., 7735
 7786, 7787
 Akiyama, K., 17242
 Alam, M., 7674
 Albath, W., 16781
 Alben, A. O., 3004
 Albers, D., 11274
 Albert, A. R., 1452
 10174, 12156
 Albert, M., 15129
 Albert, Z., 1589
 Albertson, F. W., 115, 9038
 Albrecht, W. A., 10175
 13790, 17419
 Albricht, I. C., 5729, 9537
 Albrieux, A., 9351
 Albrieux, A. S., 9300
 Albright, F., 14957
 Albus, G., 795
 796, 797, 2066
 Alcock, N. S., 8554
 Alderman, A. L., 739
 Aldous, C. M., 5230
 7087, 7088
 Aldrich, A. D., 16276
 Aldrich, W. W., 13897
 Alem, C., 5805
 Alessi, E. de, 17443
 Alexa, I., 1549
 Alexander, C. P., 3373, 14251
 Alexander, E. J., 15491, 15492, 15493
 15494, 15495, 15496
 Alexander, F., 7088
 Alexander, F. A. D., 655, 9488, 12643
 Alexander, G., 86, 103
 Alexander, G. L., 7895
 Alexander, H. E., 6026
 Alexander, H. L., 15147
 Alexander, L., 16939
 Alexander, L. T., 18847
 Alexander, L., 17605, 17616
 Alexander, S. S., 3954
 Alexander, T. R., 4916
 Alexandre, A., 13410
 Alexandrov, W. J., 4050
 Alexandrovski, B. P., 18243
 Alexrod, D. I., 17475
 Alexie, W. H., 11516, 11649
 Ali, M., 8220
 Alicata, J. E., 1554
 10477, 10478
 14157, 17897
 Alkan, W. J., 17261
 Allan, H. H., 10124
 Allan, J. R., 14983
 Allan, P. F., 5208
 Allan, W., 12558
 Allan, W. B., 617
 Allara, E., 4365, 5894
 Allard, H. A., 1378, 1628
 11875, 11901
 11902, 13739
 13750, 13763
 Allcroft, W. M., 1008
 Allee, W. C., 7183
 Allen, A., 8976, 10772
 8520
 Allen, A. A., 12437, 16134
 Allen, A. C., 9507, 16888
 Allen, B., 10189
 Allen, C. K., 11876
 Allen, D. L., 14424
 Allen, E., 428
 7069, 11405
 Allen, E. G., 10654
 Allen, E. H., 978
 Allen, E. K., 4701
 Allen, E. M., 9140
 9277, 12643, 13136
 Allen, G. M., 5209
 8854, 12441, 14308
 14312, 18085, 18105
 Allen, K. R., 141, 12618
 Allen, L. A., 11789
 Allen, M., 8312
 Allen, M. W., 18018
 Allen, M. Y., 8670
 Allen, N., 3476, 17874
 Allen, O. N., 4701
 Allen, P. J., 3136
 Allen, P. W., 10074
 Allen, R. M., 10877
 Allen, R. P., 7006
 Allen, T. D., 2353
 Allen, T. H., 1889
 12643, 16308, 17062
 Allen, W. E., 134
 Allen, W. F., 12643
 Allen, W. M., 3955, 9316
 Allende, I. L. C. de, 7963, 7973
 Alles, G. A., 4116
 12643, 13178
 Alley, A., 5583, 8053
 Allin, A. E., 4477
 Allington, W. B., 3118
 Allinson, M. J. C., 16480
 Allison, F. E., 2740
 8343, 17420
 Allison, J. B., 2146, 2745
 Allison, J. L., 3169
 Allport, N. L., 1313
 Allyn, W. F., 12433
 Almquist, H. J., 783, 6012, 7496
 9243, 16547, 16548
 Almy, E. F., 10474
 Alpers, B. J., 16829, 16949
 Alpert, B., 14955
 Alport, A. C., 5844
 Alsted, C. L., 17564
 Alsted, G., 2089
 2515, 11807
 Alsterlund, J. F., 10404
 Alstine, H. E. v., 3694, 3739
 Alston, A. H. G., 8423
 Alsop, F. W., 7605
 Alt, H. L., 2005, 2388
 Altehage, C., 7188
 Alten, F., 3099
 Althausen, T. L., 7499, 12643
 Altland, P. D., 9690
 Altmann, M., 3787, 12643
 Altmeyer, A. J., 8279
 Altnow, H. O., 7859
 Altschul, A. M., 1951, 12742
 Altschule, M. D., 2115
 13099, 16723
 Altstatt, G. E., 17805
 Alvarez, A. S., 6452
 Alvarez-Tostado, C., 7351
 Alverdes, F., 7606
 12461, 14690
 Alvig, G., 1820
 Alvig, A. S., 5480
 Alvino, G., 15624
 Amaldi, E., 1687A
 Amalfitano, G., 11561
 Amant, L. S., 13805
 Ambache, N., 13085
 Amberson, J. B., Jr., 11710
 Amberson, W. R., 12643
 Ambros, V., 10422
 Ambros, W., 1504, 8621
 Ambrose, A. M., 14144
 Ambrosioni, P., 1513, 4579
 Ameel, D. J., 14205
 Ames, F. B., 5476
 Ames, J. B., 8184
 Ames, O., 2828A, 2830
 Amick, A. E., 17118
 Amidon, E. L., 16889
 Amlong, H. U., 3059
 Amundsen, E., 10881
 Amolsch, A. L., 14867
 Amprino, R., 5910
 9492, 9706
 Amsler, C., 4141
 Amthor, L., 8041
 Anacker, I., 13522
 Ancel, P., 11418
 15072, 15073
 Andersch, M., 11219, 11220
 Andersen, E. K., 886
 887, 2564
 Andersen, E., 2154
 Andersen, F. S., 6889
 Andersen, T., 2594
 13516, 13517
 13518, 15319
 Andersh, M., 9070
 Anderson, A. K., 13036
 14439, 15727
 Anderson, A. L., 8956, 12553
 Anderson, C. E., 12643
 Anderson, C. G., 8221, 8594
 Anderson, C. W., 17332
 Anderson, D. B., 14034
 Anderson, E., 4776, 7246, 7247
 8921, 12643, 14355
 Anderson, E. E., 3979
 Anderson, E. G., 8924
 Anderson, E. J., 3169
 Anderson, E. M., 7499
 12643, 15602
 Anderson, E. O., 17393
 Anderson, G. W., 983
 Anderson, H. G., 5230
 Anderson, H. W., 17832
 Anderson, I. H., 3600
 Anderson, J. A., 1174
 1199, 2745, 2918
 6453, 11948, 15555
 Anderson, K., 898
 Anderson, K. T., 5047
 Anderson, L. D., 6700
 12181, 12204
 17878, 17879
 Anderson, L. E., 11835, 12594
 Anderson, L. P., 14638, 14651
 Anderson, M. D., 14324
 Anderson, M. S., 17609
 Anderson, N., 2690
 Anderson, O. C., 3137
 Anderson, O. D., 7088, 12643
 Anderson, P. J., 4999
 Anderson, R. H., 16149
 Anderson, R. J., 2752
 2775, 2779, 14440
 15814, 17444, 17910
 Anderson, R. L., 1760
 Anderson, S. F., 3979
 Anderson, T., 11573
 Anderson, W. A., 1096, 12566
 Anderson, W. A. D., 9629, 14667
 Anderson, W. E., 6701
 Anderson, W. H., 17989
 Anderson, W. S., 13791
 Andersson, A., 4240
 Andersson, K. A., 1857, 1858
 Andersson-Kotté, I., 5306, 5307
 Andervont, H. B., 2372
 9590, 16830
 16831, 16832
 Andes, J. E., 7288, 7300
 Andrá, E. v., 4421
 Andre, M., 6851
 Andreadis, T., 12017
 Andraessen, E., 3788
 Andren, S. G., 15324
 Andres, A. H., 1715
 Andrew, W., 7110
 7945, 11388
 Andrews, C. H., 4537
 Andrews, H. N., 13715
 Andrews, J. C., 16474
 Andrews, J. S., 14158, 14159
 Andrews, K. C., 16474
 Andrieu, E., 2014
 Andrus, C. F., 3169
 Andrus, E. C., 7702
 Andrus, W. De W., 16418
 Ange, L. E., 15035
 Angellini, L., 17445
 Angelo, E., 1224
 Angerer, R. v., 2668

- Angevine, D. M.,...830
4429, 4610, 9601
Angle, F. E.,...11516, 11649
Anglesio, D., 2516, 2517
Angrisani, D.,...2407
Angulo y González,
A. W.,...16966
Anido, V.,...6141
6741, 14192
Anigstein, L.,...8190
Ankel, W. E.,...14228
Annett, H. E.,...8460
Anokhin, P. K.,...4008
Anrep, G. V.,...7674
12713, 14493, 16706
Ansbacher, R.,...16550
Anschütz, S.,...14441
Ansley, H. A.,...4430
Anslow, W. K.,...8330
Anson, B. J.,...669
706, 15052, 16967
Anson, M. L.,...185
Anson, E.,...18026
Anson, J.,...4851
Antener, L.,...1942
Antenner, L.,...7316, 16383
Anthony, A. J.,...14587, 14588
Anthony, R. D.,...13852
Antiles, H.,...7868
Antoine, G.,...11719
Antoine, M.,...5130
Anton, H.,...224, 697
Antonio, R. F.,...12643
Antonini, A.,...15981
Antonio, T.,...16770
Antopol, W.,...8555
6051, 7264, 7738
Anzai, H.,...8154
Aoki, K.,...798, 799
800, 4431, 9827
Apacan, A. L.,...8453
Apéria, A.,...2264
Apgar, C. S., Jr.,...12463
Apitz, K.,...12743
Appel, H.,...12820
Appel, M.,...12643
Appel, O.,...10378
Apperly, F. L.,...2389, 7527
Applebaum, I. L.,...14539
Appleby, J. C.,...11789
Applewhite, J. D.,...6221
Apte, N. S.,...78
Apitz, K.,...10882
Aquino, D. L.,...1043
4856, 8482, 17421
Aragón, H. B. de, 15945
Aragon, V. B.,...4815
Arakawa, S.,...17219
Arakawa, T.,...11816
Aranovich, J.,...2434
7946, 7947
Arant, F. S.,...3180
Arata, M.,...4820
Araújo, O. da S., 18633
Arber, A.,...18779
Arbesman, C. E.,...11525, 11566
Arborelius, M.,...4267
Arceneaux, G.,...15527
Arceneaux, T. J.,...5808
Archbold, R.,...7055
Archer, A. F.,...8993
Archetti, I., 5085, 13285
Archibald, R. M., 11089
Arctowski, H.,...16230
Arditti, ...2919
Ardoint, P.,...12937
Arenas, A.,...3850
Arenas, N.,...7574
14674, 14686
Arenas, R.,...13391
Arendale, J. M., Jr.,...3492
Arens, K.,...4816
Arestano, G.,...2283
Argaud, R.,...11377
Argeseanu, S.,...7111, 8032
Argyll, C. J.,...16843
Argyropulo, A.,...12442
Ari, L.,...7772
Ariel, I. M.,...5799
Ariens Kappers, J., 2452
Arima, J.,...6535
Ark, P. A.,...8608
14051, 15863
Arkhangelskaya, N.,...17797
Arkoosh, M. A.,...10523
Arlé, R.,...14277
Armentano, L.,...826
Armijo, E. R.,...4541
Armstrong, C.,...15166
Armstrong, C. W. J.,...12643, 13000
Armstrong, G. M., 3169
Armstrong, S. F.,...2920, 13792
Armstrong, S. H., Jr.,...16684
Armstrong, W. D., 4348
Arnaud, C., 4702, 11775
Arnaback-Christie-Linde,
A.,...6946
Arndt, W.,...3313
10531, 10532
Arnett, J. H.,...8682
Arnold, A.,...11012, 12837
Arnold, C. A.,...10095, 13716
Arnold, D. C.,...14699
Arnold, F. A., Jr.,...15297
Arnold, H.,...4575
Arnold, J. J.,...11720
Arnold, L.,...2104, 6114
Arnold, L. E.,...6550
Arnold, L. W.,...5176
Arnold, O.,...8939
Arnold, O. H.,...9279
Arnold, R. B.,...15402
Arnold-Forster, W.,...10214
Arnon, D. I.,...6560
10297, 13972, 17671
Arnou, L. E.,...12802
Arnulf, A.,...11132
Arny, A. C.,...2951
Aromando, A.,...6104
Aron, M.,...14644
Aronson, H. G.,...209
Arquie, ...8142
Arrhenius, O.,...1350
Arrillaga, F. C.,...7739
Arroyo, R.,...4687
Arruga, H.,...12489
Arthur, J. M.,...1225
Artschwager, E.,...12018
Artz, L.,...17060
Aruga, H.,...4798
Arwidson, T.,...16045
Asahina, S.,...16754
Asakawa, H.,...8154
Asakawa, Y.,...7119
Asana, J. J.,...8568
Asana, R. D.,...8568
Aschaffenburg, R.,...18363
Ascham, J. K.,...16526
Ascham, L.,...307
Ascheim, S.,...11413
Ascher, M. S.,...6111, 13509
Aschkenazy, ...5830
Aschoff, L.,...11946
Ashburn, L. L.,...8232, 14873
Ashby, E.,...3295, 8896
Ashby, G. K.,...14486
Ashby, H.,...8896
Ashe, W. F.,...11345
Ashkenaz, D. M.,...4009, 7651
Ashley, C., 5655, 16609
Ashley-Montagu, M. F.,...15051
Ashman, R., 7703, 9508
Ashplant, H., 4866, 4867
Askar, A. M.,...8220
Ask-Upmark, E.,...1905, 3789
Aslett, E. A.,...14590
Asmundson, V. S.,...95, 784, 5938
11502, 11503, 14366
Asmussen, E.,...9509, 9510
9511, 9512
16572, 16573
16707, 16721
Aspdén, W.,...14292
Ass, T. B.,...9110
Ast, S.,...8430
Astbury, W. T., 14440
Astrachan, G. D., 15179
Astre, G.,...5210, 5211
Astwood, E. B.,...9411
12643, 12930, 16587
Asuyama, H.,...5012, 15842
Atchley, D. W.,...7088
Athawes, W. L.,...6268
Atkeson, F. W.,...6011
Atkin, L., 5565, 16333
Atkins, O. A.,...14033
Atkins, W. R. G.,...1835, 10799
Atkinson, A. J.,...9268
12643, 14613
Atkinson, A. K.,...12643
Atkinson, C. E.,...8804
Atkinson, C. H.,...11960
Atkinson, D. W., 14923
Atkinson, H. J.,...8478
Atkinson, N.,...836
Atkinson, W. E.,...5214
Atlas, M.,...366
Atsatt, S. R.,...7607
Attwood, A. M. P.,...17268
Atwell, W. J.,...4377
Atwood, C. E.,...10423
Atz, J. W.,...6951
Atzler, E.,...2246, 9493
Aub, J. C.,...9404
Aubel, C. E.,...4402
Aubel, E.,...12706
Auberville, A.,...2843
Auer, J.,...2090
7500, 18137, 18178
Auerbach, O.,...4055
Auerbach, S. H., 11614
Augustin, Z.,...7675
Augustine, D. L.,...1539
10479, 15946
Auhagen, E.,...5845
Auler, H.,...4178, 9581
Aumann, K.,...12643
Aumann, K. W., 11041
Aumonier, F. J., 16115
Auringer, J.,...12643
Austin, G., 16824, 16825
Austin, J. H.,...7244, 7451
Austin, O. L.,...5413
Austin, T. S.,...18105
Auttenner, I.,...12053
Avanzi, E.,...1175
Avens, A. W.,...1491
Avery, B. F.,...9101
Avery, G. S., Jr.,...15703, 17678
Avery, H.,...13196
Avrin, I.,...1963
Awai, F. R.,...6808
Axelrod, D. I.,...2781
Axelsson, J.,...5976
Axtmayer, J. H., 13793
Ayers, T.,...3169
Ayrold, C. E.,...3790
Ayrold, W. R.,...10948
Ayman, D.,...11160
Ayre, O. A., 1174, 6453
Azarme, E., 4414, 4415
Azevedo, P. de, ...5895, 12417
Azim, A., 10480, 10536
B
Baader, G.,...15625
Baars, J. K., 6192, 6297
Baas-Becking, L. G. M.,...5894
Babb, M. F.,...4987
Babcock, E. B.,...68
1122, 4777, 16208
Babel, F. J.,...6273
Babers, F. H.,...244
Babić, K.,...16048
Babji, P. P.,...12384
Babkin, B. P.,...5538, 16685
Babliet, J.,...2746
Babudieri, B.,...1687A, 6175
Baccari, V.,...5587
Bach, S. J., 7415, 16485
Bach, T. F.,...10935
Bacharach, A. L.,...5481, 9242
Bachman, C.,...11056, 16608
Bachman, G.,...12643
Bachman, G. W., 14192
Bachman, W.,...16451
Bachmann, G.,...9193, 10983
Bachmann, H.,...4101
Bachmann, W. E.,...568, 12931
Bachrach, W. H.,...7501
Bacigalupo, J.,...964
1540, 6715
14160, 14192
Back, E. A.,...14101
Backer, J. E.,...8231
Backert, P.,...13998
Backman, A. L.,...2732
Backman, G.,...2089
9203, 9204
Backus, M. P.,...6336
Bacon, H. E.,...16333
Bacon, S. R.,...15573
Bacq, Z. M.,...5730
5754, 14657, 14739
Bacsich, P.,...16980
Bade, H.,...9582
Badens, P.,...15381
Badenski, G.,...11612
13555, 13556, 14188
Bader, E.,...14155
Bader, R.,...4562
Badoux, E.,...1283
Badoux, H.,...15909
Baechler, R. H.,...15365
Baehni, ...2865
Baer, E.,...10977
10978, 10979
Baer, J. G.,...6739
Baertich, E.,...5443
Baethke, E.,...4504
Bagchi, K. N.,...10989
Bagg, H. J., 5800, 16834
Baggenstoss, A. H.,...3743
Bagh, K. v.,...7652
Baginski, I.,...11418
Baginski, S.,...4316
11383, 11418
Bahnsen, P.,...2284
Bahr, J.,...15291
Bahr, L.,...8282
Baidin, A.,...9412
Bailey, A. J.,...13941
Bailey, A. M.,...1640
Bailey, B. E.,...6948
Bailey, C. H.,...1897
Bailey, D. A.,...3469
Bailey, G. H.,...4196
Bailey, I. W.,...8445
Bailey, J. H.,...6176
Bailey, J. R.,...10632
Bailey, J. S.,...17622
Bailey, K.,...7676
Bailey, L. H.,...11858, 11859, 11860
11861, 11862, 11863
Bailey, P. L., Jr.,...5968, 11456
18033, 18034
Bailey, S. F.,...10446
18033, 18034
Bailey, V.,...18086
Bailey, W.,...13388
Bailey, W. W.,...3539
Bailliant, P.,...14753
Baillif, R. N.,...4308
Baillif, J.,...9952
10439, 17193
Baily, J. L., Jr.,...12313
Bain, D. C.,...17828
Bain, H. E.,...2795
Baines, E. J.,...14784
Baines, R. C.,...6677
14036, 15794, 17746
Baiocchi, P.,...5917
Bairati, A.,...5911
Baird, A. M.,...1164
Baird, F. D.,...3738
Baird, R. D.,...4511
11556, 13485
Baitsell, G. A.,...7069
Baker, A. B.,...569
Baker, A. L.,...5977
Baker, A. O.,...8873
Baker, A. Z.,...7476
Baker, C. L., 6949, 6950
Baker, D. D.,...4308, 15042
Baker, D. W.,...12243
15947, 15957, 17890
Baker, E. E.,...6257
Baker, E. G.,...1123
Baker, F., 4671, 11784
Baker, F. O.,...10441
12210A, 12660
13455, 13558
Baker, G. A.,...7166
Baker, G. E.,...6364
Baker, G. O.,...12056
Baker, H.,...16251
Baker, H. B.,...5114
Baker, J. R.,...9008
Baker, K. H.,...7626
Baker, L.,...10892
Baker, L. E., 375, 740
741, 5953, 9766
Baker, M. S.,...2844
Baker, O. E.,...16129
Baker, R. C.,...17035
Baker, R. D.,...967
Baker, R. E.,...8599
14037, 14038, 14090
Baker, R. H., 5219, 5236
Baker, R. L.,...16822
Baker, T. W.,...475
Baker, W. A.,...17863, 17876
Baker, W. D.,...11721
Baker, Z.,...7409
16475, 16480
Bakes, F. P.,...7653
Bakhuizen, van den
Brink, R. C.,...8431
Bakke, A. L.,...10176
10177, 11944, 17565
Bakker, D. L.,...17069
Bakwin, H.,...17004
Bakwin, R. M.,...17004
Balansard, J.,...6586, 7558
Bălăşchev, E. P.,...4693
Balassa, G.,...11337
Balbi, E.,...8096, 8097
Balbi, G.,...3043
Balch, R. E.,...10424
10425, 14123
Balch, R. T.,...13825
Baldacci, E.,...2796
9975, 17809
Baldes, E. J.,...487
7711, 12643, 13114
Baldof, W. V.,...10601
Baldwin, F. M.,...7528, 12793
Baldwin, I. L.,...17765
Baldwin, J. T., Jr., 8905
Bale, W. F.,...10991
12643, 12818, 14547
Balfour-Browne, J.,...10589
Ball, C. R.,...2844
Ball, E.,...2747
Ball, E. G.,...7261
Ball, H. A.,...14520
Ball, J.,...9413
Ball, T. Z.,...17119
Ballard, W. W.,...11448
Ballenden, S. St. C.,...1688, 2389
Balli, A.,...9246
Ballière, A.,...16911
Ballif, L.,...1548
Ballin, J. R.,...12643
Ballon, H. C.,...16574
Ballou, F. H.,...2977, 14091
Balls, A. K.,...4949
Ballweg, H. A.,...9635
Bally, F. R. O.,...10283
Balme, J.,...11996
Balogh, J.,...5373, 6852
Balozet, L.,...11674, 17929
Balsamelli, F.,...2734, 5549
Balteanu, E. M.,...13425
Balteanu, I., 1549, 6199
Balveat, R. M.,...13392
Bamford, P.,...6119
Bamford, R.,...4814
Bancroft, F. W., 17289
Bandemer, S. L.,...6024
Bandier, E., 4260, 7289
Banerjee, D. N.,...7740
Banerjee, S.,...3106
Banfield, L.,...8242
Bang, F.,...8522
Bangham, R. V.,...14405, 15948
Banhegyi, J.,...10706
Banks, A., 10032, 10038
Bannen, J. E.,...7860
Bannick, E. G.,...7839
Banting, F. G.,...11275
Banus, M. G.,...2247
Banyai, A. L.,...12918
Baptist, M., 5655, 16609
Bär, A. L. S.,...17566
Barabash-Nikiforov, I.,...5212
Barach, A. L.,...11042, 11043
Baranowski, T.,...7685
10985, 12661, 13086
Baranyai, P.,...7772
Barber, C.,...13469
Barber, C. W.,...11722
Barber, G. W.,...15899
Barber, M.,...4704
Barber, M. A.,...15913
Barber, R.,...11818
Barber, T. C.,...10407
Barbier, P.,...14515
Barbour, G. M.,...806
11580, 15184
Barbour, H. G.,...7741
7742, 12643
Barbour, O.,...4268
Barbour, T.,...8869
Barclay, A. E.,...476, 5584

- Barcroft, J., 867, 3615, 7575
7576, 10962, 11115
Bard, P., 12643
Baré, J., 17368
Barellier, G., 14573, 14591
Barelare, B., 12643
Barelare, B. Jr., 3728
3958, 16525
Bargen, J. A., 14699
Bargmann, W., 4341
Bärnash, A. P., 7268
Baristy, M., 18138
Barigozzi, Cl., 1695
Barkalow, F. S. Jr., 18105
Barkan, G., 12707
Barkan, O., 7687
Barker, J., 10215
10222, 17694
Barker, M. H., 2134
Barker, N. W., 5719
Barker, P. S., 5709
Barker, R. W., 14196
Barker, S. B., 12643, 12812
Barker, W. H., 322, 7871
Barkley, F. A., 15497
Barlow, O. W., 12643, 13189
Barmack, J. E., 11116
Barmann, J. M., 7781
Barmenkov, Ia. P., 9087
Barnard, C., 1226
Barnard, J. E., 5257
Barnard, R. D., 551, 1952
Barnell, E., 6505
Bärner, J., 8396
Barnes, A. R., 16725
Barnes, B. O., 12643
Barnes, L. L., 14554, 14555
Barnes, M. N., 18597
Barnes, R. H., 9190
9247, 9650
12643, 14540
Barnes, T. C., 8544
5426, 14442
Barnett, A., 9685
Barnett, C. W., 15273
Barnett, H. L., 527
Barnett, J., 7743
Barnette, R. M., 2964
6451, 10216
Baron, B., 15174
Baroni, U. C., 12735
Barr, O. G., 10178, 15784
Barrera, S. E., 12643
Barreto, J. de B., 13634, 13635
13686, 13687, 13688
Barrett, E., 3580
Barrett, F. N., 2502
Barrett, H. M., 2285
7559, 10691
Barrett, J., 4000
Barrett, J. F., 1981
Barrett, J. T., 17829
Barrie, M. O., 5846
Barrien, B. S., 17717
Barrientos, E., 17144
Barron, D. H., 11115
Barron, L. E., 7502
Barrons, K. O., 6665, 15843
Barros e Cunha, J. G. de, 8399
Barrow, W. H., 11630
Barrows, E. F., 3461
Barrows, M. B., 12619
Barsch, O., 11504
Barsoum, G. S., 7674
12713, 13085
14493, 16706
Barss, H. P., 15389, 16139
Bartel, A. T., 2921
Bartels, E. C., 9248
Barten, H., 17005
Barth, L. G., 8040
Barthelemy, H. L., 7919
Barthelet, J., 15795, 15844
Barthelmess, A., 64
Barthmeyer, E., 6809
Bartholomew, E. T., 14103, 15584
Bartlett, A. V., 6177
Bartlett, E. L., 11276
Bartlett, J. B., 1044
Bartlett, J. W., 9315, 13850
Bartlett, K. A., 12860
Bartlett, M. S., 5301
Bartlett, N. B., 11123
Bartlett, N. R., 7634
Bartlett, P., 14625
Bartlett, S., 8066
13858, 13859
Bartley, S. B., 4016
Bartoli, A., 16588
Bartoli, A. J., 12643
Bartoli, G., 15048
Barton, L. V., 6583
6584, 6586, 17692
Bartos, E., 6833
6857, 10584
Bartram, E. B., 2828A
3699, 8417
Bartram, M. T., 10075
Bartram, W., 8363
Bartsch, A. F., 15705
Bartsch, H. L., 12643
Bartsch, O., 785
Bartsch, P., 10557
Bartsch, H. K. G., 8616
Basilewsky, J., 3322
Basinger, A. J., 3172, 8634
Basio, E., 17094
Basnuevo, J. G., 6141
6720, 6741, 14192
Bass, A. D., 13139, 13178
Bass, C. C., 9063
Basset, J., 6222
Bassett, A. S., 5168
Bassett, S. H., 3694
3739, 5657
Bassi, P., 3940
Bassi, V., 13922
Bassindale, R., 1827
Bassler, A., 2091
Basso, J. L., 4179
Baštecký, J., 12643
Bastedo, W. A., Jr., 5556
Bastman, L., 5792
Basu, B. C., 9915
15186, 15949
Basu, K. P., 6454
Basu, U. P., 811
5525, 10949
Bataille, M., 8886
Batchelder, O. H., 17883
Batchelor, L. D., 8489
Bate, R. C., 7118
Baten, W. D., 5360
Bates, G., 11675
Bates, M., 5054
Bates, R. D., Jr., 322
Bates, R. W., 7534, 16589
Bathie, H. P. de da, 11877
Batjer, L. P., 3146
Batra, H. N., 17858
Batt, H. T., 12643
Battaglia, M., 2748
Batten, E. T., 3169
Batterman, R. C., 516
Battro, A., 14756
Battum, C. M. v., 9249
Bauch, R., 4733
Baucke, J., 5568, 11019
Baudet, E. A. R. F., 14215
Bauer, A. H., 15889
Bauer, D. J., 7704
Bauer, F. C., 17864
Bauer, H., 87
4102, 6181, 7744
7745, 10711, 15208
Bauer, J., 116
Bauer, K., 8041, 9767
Bauer, W., 2278, 9158, 9604
12643, 14913, 14957
Bauermeister, W., 9716, 9717
Bauman, L., 5851
Baumann, C. A., 570
12643, 14874
14905, 16835
Baumann, E. J., 2117, 7535
Baumann, L. G., 3713
Baumgartner, A. M., 6989
Baumgartner, F. M., 18056
Baumgartner, L., 11649
Baumwell, E., 11723
Baur, E., 3083
Baur, K., 10374
Baur, K. E., 17749, 17834
Baür, L., 17744
Baür, R., 13789
Bausch, J., 10125
Bausor, S. C., 15704
Bavendamm, W., 6337
Bawa, H. S., 17236
Bawden, F. O., 1428
4974, 4975, 6644
Baweja, K. D., 12572
Baxter, C. R., 7872
Baxter, D. V., 10108
Baxter, H., 1953
Baxter, J. H., Jr., 7797
11248, 11249, 13178
Baxter, J. S., 17036
Baxter, S. G., 1953
Bay, J. W., 104
Bayer, A. W., 8979, 11966
Bayer, L. M., 9630
Bayles, B. B., 17596, 17602
Bayley, J. H., 15043
Bayliss, L. E., 1821, 7529
Baylor, J. W., 617
Bayly, B. de F., 1804
Bayne-Jones, S., 15427
Bazemore, M. K., 15274
Bazett, H. C., 2265
4056, 7244, 12643
Beach, B. A., 8339
Beach, E. E., 3675
7330, 14494
Beach, E. P., 51
Beach, F. A., 18087
Beach, F. A. Jr., 2172
Beach, J. R., 6223
Beachell, H. M., 11932
Beachell, K. G., 8074
Beadel, H. L., 5414
Beadle, B. W., 412
Beadle, G. W., 1760, 3462, 5649
7244, 10726, 16166
Beakbane, A. B., 17623
Beal, J. M., 8906
Beall, G., 8967, 12229
Beamer, P. R., 15292, 15392
Beamer, R. H., 16037, 16088
Beams, H. W., 742
1716, 2466
Beams, J. W., 3596
Bean, A. H., 2974
Bean, D., 3433
Bean, J. W., 4028
7331, 9494, 12643
Bean, W. B., 4057, 11345
Beanfield, V., 11818
Bear, R. M., 9476
Bear, R. S., 12643, 16293
Beard, H. H., 345
9188, 9355
13007, 16476
Beard, J. W., 947
2610, 9600
Beard, R. E., 11596
Beare, G. E., 790
Beaurup, A. J., 8683
Beater, B. E., 1215
Beath, O. A., 10179
10776, 15092
Beaton, L. E., 706
15052, 16967
Beattie, F. J. R., 17054
Beattie, J. H., 8572
Beatty, R. K., 12162
Beatty, O. A., 16890
Beatty, S. A., 11758
Beatus, R., 13727
Beaumont, A., 15796
Beaumont, J. H., 2978
13875, 17624
Beaven, G. F., 16252
Beavens, E. A., 1020
Beaver, P. C., 12289
Beaver, W. C., 5269
Beazell, J. M., 3632
7501, 9268
Bebee, M. O. Jr., 9370
Beccari, E., 7753
Bechdel, S. I., 9811A
11494, 13038
Beckhold, K., 14588
Beck, A., 9981, 17290
Beck, A. B., 15388, 15389
Beck, C. E., 955, 13557
Beck, E. C., 1035, 2797
Beck, F. F., 2105
Beck, G. H., 2480
Beck, H. H., 5435
Beck, J., 11414
Beck, M. W., 2972
Beck, R. C., 7873, 8253
Beck, W. A., 1870
1403, 4947
Becker, C. L., 3448
8936, 12517
Becker, E., 12540
12932, 12982
Becker, E. R., 3237, 9820
Becker, F., 52
Becker, F. D., 1613, 10551
Becker, F. T., 13393
Becker, H., 6670, 12794
Becker, J. E., 4186
Becker, M., 15094
Becker, R., 8068
Becker, R. F., 12643
Becker, S. W., 17141
Becker, T. J., 2423
Becker, W., 17120
Becker, W. B., 10426
Becker, W. D., 14124
Beckley, V. A., 3042
Beckman, H., 11209, 13178
Becks, H., 13265
Beckwith, T. D., 3305, 9874
Becnel, I. J., 6865A
Bedard, W. D., 10427, 14125
Bedell, G., 13923
Bedell, S. G., 8003
Bedford, C., 2726
Bedford, T. H. B., 10853
Bedson, S. P., 8310
Beebe, N. P., 1227
Beecher, H. K., 2218, 14709
Beek, C. Mc I., 3766
Beekhuis, W. H., 13624
Beeks, H., 7525
Beeley, F., 6689
Beeli, M., 1072
Beer, A. G., 11074, 13069
Beer, E. J. de, 273
Beer, F. M., 8768
Beers, C. D., 1575, 10514
Beeson, C. F. C., 10607, 16027
Beetle, A. A., 6430
Beauwies, H., 8354
Begatti, A., 6205
Bégué, H., 15931
Behle, W. H., 5219
Behning, A. L., 16015
Behnke, A. R., 11044, 11372
Behr, G., 6314, 15574
Behrens, C. A., 11517
Behrens, M., 12872
Behrens, O. K., 9506, 14447
Behrman, A. S., 2419
Behr-Negendank, C. G., 12582
Behrnt-Jensen, H., 12711
Beier, M., 6858
Beiler, A., 12082
Beilly, J. S., 16590
Belcher, D., 3547
Belding, H. S., 9180
Belfer, S., 10853
Bell, J., 11479
Bell, E. L., 6932
Bell, E. T., 2135
Bell, F. N., 1009, 1015
Bell, G. D. H., 14856
Bell, W. C., 6818
Bell, W. H., 5271
Bellamy, A. W., 12956
Bellamy, R. E., 12361
Bellea, L., 5602
Bellerby, C. W., 3954
3956, 3957
Bellet, S., 16722
Bellevue, G., 4103
Bellini, L., 9253
Bellis, C. J., 13100
Bellows, J., 7379
Bellows, M. T., 15293
Bellows, R. T., 3672, 9454
Bellucci, R., 9179
Belou, P., 13292
Belser, W. B., 11013
Belt, T. H., 9250, 14984
Belval, H., 13742
Benaglia, A. E., 12643, 13504
Ben-Amotz, Y., 3213
Bénard, H., 14573, 14591
Benazzi, M., 14675
Benbow, J. T., 16614
Benda, C. E., 16981
Benda, R., 13103
Bender, C. B., 15106, 17087
Bender, M. B., 7638
7646, 9141, 12643
Bendien, W. M., 8650, 7332
Benedek, T., 7060, 13625
Benedict, F. G., 3543, 3663, 4098
4405, 5213, 7069
Benelli, R., 5731
Benesh, B., 8764
Benevskaya, O. V., 2248
Bengtson, I. A., 17206
Benham, R. W., 6203, 17323
Benigni, R., 7746
Benignus, E. L., 606
Benincasa, M., 4817
Beninde, 15626
Benjamin, H. R., 7414
Benner, M. C., 11455
Bennett, A. E., 15180
Bennett, A. L., 12643
Bennett, B. L., 1018
12210A, 13558
Bennett, C., 8312
Bennett, C. A., 17580
Bennett, C. W., 1482
3169, 12133
Bennett, E. S., 8255
Bennett, F. T., 8600, 8617
Bennett, G. A., 2278
9158, 14495
Bennett, H., 12490
Bennett, H. H., 105
Bennett, H. J., 6716
6781, 6782, 6783
6784, 6801, 12290
Bennett, L. J., 10815
Bennett, M. A., 16477
Bennett, M. K., 8454
Bennetts, H. W., 6120, 6224
Bennington, N. L., 14405
Bennitt, R., 160, 18105
Benoist, E., 1697
Benoist, R., 2846, 8432
Benoit, J., 14639
Benotti, J., 1938
16377, 16378
Bensley, B. A., 659
Bensley, E. H., 7874
11358, 12643
Bensley, R. R., 36, 173
Bensley, S. H., 36, 376
Benson, L., 17517
Benson, N., 2964
Benson, S. B., 18088
Bent, A. C., 12437
Bent, H. F., 174
Bentley, L. S., 6004
Benton, T. H., 15577
Bernal, H., 8595
Benzinger, T., 3771, 3772
Benzoni, G., 4432
Bequagnet, J., 14264
Bequignon, R., 2620
Berard, P., 11759
Berberian, D. A., 13659, 15175
Berckhemer, F., 9718
Berconsky, I., 4058
Berdan, H., 17484
Berenblum, I., 5494
7407, 8098
Berencsi, G., 4705, 4713
Berend, N., 12873
Berens, C., 6182
11184, 11653, 17326
Beres, D., 16891
Berg, C. P., 5537
Berg, F., 13061
Berg, K., 16274
Berg, L. M. van den, 5732, 11161, 11162
Berg, M., 13276
Berg, S., 7817
Berg, V. L., 1496
Bergel, F., 6557, 9280
Berger, C. A., 53, 3452
Berger, F. M., 17325
Berger, G., 12820
Berger, J., 272, 2749
Berger, P., 7705
Bergerhoff, W., 9667
Bergey, D. H., 15130
Berggreen, P. F., 11642

- Bergh, F., 274
 Bergh, L. v. d., 1576
 Berglund, H., 2136
 Bergman, A. J., 14607
 Bergman, H., 297
 Bergman, H. C., 651, 9190
 Bergman, H. F., 12143, 15589
 Bergmann, K., 11244
 Bergmann, M., 5445
 Bergmann, W., 5455, 7290, 14447
 Bergmann, W., 14451, 14454, 16334
 Bergmann, W., 13197
 Bergounioux, F. M., 16057
 Bergren, W., 15716
 Bergren, W. R., 2249
 Bergsternmann, 17370
 Bergstermann, H., 5733
 Bergström, I., 12518
 Bergström, P., 2309
 Bergström, S., 5767
 Berk, L. H., 11163
 Berkley, E. E., 17551
 Berland, L., 14239
 Berlin, R., 5826
 Berman, A. L., 9268, 12643
 Berman, M., 13306
 Bernal, J. D., 4976
 Bernard, F., 16270
 Berns, M., 11268
 Berndt, R., 705
 Bernhard, C. G., 16686
 Bernhard, K., 13140, 16478
 Bernhart, F. W., 12802, 14462
 Bernhauer, M., 6866
 Bernheim, A. I., 2357
 Bernheim, A., 14582, 14583
 Bernheim, F., 206
 Bernheim, M. L. C., 207, 2286, 5446
 Bernheim, M. L. C., 5477, 7503, 14785
 Bernheim, M. L. C., 206, 207, 2286
 Bernheimer, A. W., 5446, 5477, 7503
 Bernheimer, A. W., 3254, 6760
 Bernkopf, H., 950, 4466
 Bernon, L., 8927
 Bernstein, M., 5710
 Bernstein, M. J., 9113
 Bernstein, S. S., 7330, 14494
 Bernstein, T. B., 9823, 13417
 Bernthal, T., 12643, 12919
 Bernton, H. S., 13490
 Berridge, A., 2502
 Berrien, F. K., 7608
 Berry, C., 7609, 9434
 Berry, C. E., 7655
 Berry, C. E., 6206
 Berry, C. T., 5112, 14233
 Berry, E. W., 17476, 17477
 Berry, G. P., 6032, 17446
 Berry, H., 1314
 Berry, H., 6027, 8283
 Berry, J. C., 15103
 Berry, J. E., 4422
 Berry, P. A., 3204
 Berry, R. J. A., 16968
 Berry, R. O., 54
 Bernstein, A. O., 2028
 Berta, L., 4476, 7359
 Bertani, G. C., 13640
 Bertelsen, E., 3491
 Berthelot, A., 2700, 7577
 Berthelot, A., 14786
 Berthier, G., 14877
 Bertin, L., 8805, 18040
 Bertola, A., 11308
 Bertolo, A., 16961
 Bertoni, G., 8099
 Bertrand, 2219
 Bertrand, G., 4955
 Bertrand, L., 10699, 11997
 Bertrand, L., 11355
 Bertrand, P., 2905
 Bertrand, P., 4722, 10680
 Besant, J. W., 11972
 Besley, A. K., 8078
 Besnard, P., 13394
 Besredka, 8100
 Besredka, 10076, 13394, 16836
 Bessemans, A., 3664
 Bessemans, A., 4607, 4706
 Bessemans, A., 13395, 13598
 Bessey, E. A., 11810
 Bessey, O. A., 1911
 Bessey, O. A., 2059, 2067
 Bessières-Kreimer, 2589
 Best, C. H., 300, 802, 2808
 Best, R. J., 12643, 14440, 16746
 Best, R. J., 8608
 Bethke, A., 9709
 Bethel, R., 6518
 Bethell, F. H., 14676
 Bethke, R. M., 11505, 15116
 Bettman, R., 11028
 Betts, E. M., 17485
 Beutner, R., 1
 Bever, A. K. v., 11017
 Bever, W. M., 3138, 17810
 Bevere, L., 8655, 15924
 Beversluis, J. R., 3016, 11998
 Bevin, S., 3666, 16613
 Beyer, E. M., 7989
 Beyer, J., 17006
 Beyer, K. H., 12643, 14788
 Beyma thoe Kingma, 6338
 Beynum, J. v., 4688
 Bhaduri, P. N., 3447, 5284
 Bharucha, F. R., 4647
 Bharucha, K. H., 4647
 Bhaskaran, T. R., 4689
 Bhaskaran Nair, K., 3289
 Bhatia, B. M., 16027
 Bhatia, M. L., 2474, 12305
 Bhatnagar, S. S., 8101
 Bhattacharyya, S., 5501, 5502
 Bialaszewicz, K., 8042
 Biale, J. B., 15744
 Bianchi, C., 16399
 Bianchi, F. A., 3396A
 Bianchi, G., 13323
 Bianchi, L., 5392
 Biasotti, A., 3836, 3837
 Bibbins, F. E., 13552
 Bibby, B. G., 960, 6082
 Bibby, B. G., 8230, 13597, 17446
 Bichel, J., 4241
 Bick, G. H., 6987
 Bickel, A., 7397
 Biddulph, O., 7964
 Bideau, J., 13605
 Bidwell, C. B., 3166
 Biebel, J. P., 1226
 Bieherdorf, G. A., 5042
 Biedermann, K., 2118
 Bieling, R., 626
 Bieling, R., 801, 8191, 9829
 Bielski, Z., 14754, 14781
 Bienka, E. J., 7504
 Bier, A., 12514
 Bier, J. E., 14039
 Bier, O., 5815, 5816, 9830
 Bier, O., 13396, 13397, 13472
 Biereigel, R. O., 4349
 Bierrich, R., 4180
 Bierig, A., 6867
 Bierman, W., 13421
 Bierry, H., 16400
 Bierry, R., 14416
 Biester, H. E., 11277, 11724
 Bieter, R. N., 9923
 Bieter, R. N., 11574, 11593
 Bieter, R. N., 18178, 16763
 Bigatti, A., 8249
 Bigatti, A., 11644, 13619, 13620
 Bigelow, H. B., 12620
 Biggart, J. H., 7895, 7904
 Bigger, J. H., 15536
 Bigger, J. H., 17864, 17865
 Bigger, J. W., 15410
 Bigler, J. A., 15181
 Bignardi, C., 11423
 Bigot, A., 14223
 Bijlsma, U. G., 9513
 Bilham, P., 1021
 Biller, S. B., 13244
 Billimoria, M. C., 15785
 Billings, S. C., 1502
 Billings, W. D., 1836
 Billingsley, L. W., 5609
 Biltz, G., 15315
 Bimler, W., 17007
 Binder-Kotzba, G., 8331
 Bindewald, H., 9831
 Bindloss, E. A., 3457
 Binet, L., 3773, 5734
 Binet, L., 5735, 13249, 16755
 Binet, M. E., 2092, 3744
 Bing, I., 2137
 Bing, J., 1912, 3731
 Bing, J., 12643
 Bing, R. J., 14875
 Binkley, J. S., 7315
 Binkley, S. B., 12870
 Binkley, S. B., 9245, 12870
 Birkeland, J. M., 12871, 16549
 Biocca, E., 1541
 Birand, H. A., 5379
 Birch, T. O., 11999
 Birch, T. T. C., 1417
 Birch, T. W., 7475
 Birch, T. W., 10614
 Bird, H., 7468
 Bird, H. R., 2691, 7468
 Bird, M. S., 10997
 Bird, S., 11506, 11507
 Bird, S., 1687A
 Birelli, G., 7224, 7225
 Birge, E. A., 7224, 7225
 Birkeland, J. M., 14648, 17471
 Birkhaug, K., 8102
 Birkhaug, K. E., 327
 Birkhaug, K. E., 7890, 7891
 Birnberg, O. H., 9648
 Biro, D., 17008
 Bissbee, R. E., 5876
 Bisby, G. R., 10109
 Bischoff, F., 3791, 4269
 Bischoff, H. W., 16591
 Bisgard, J. D., 9671
 Bishop, C. L., 3769
 Bishop, D. J., 16213
 Bishop, G. H., 12643
 Bishop, L. B., 1641
 Bishop, L. F. Jr., 11164
 Bishop, L. M., 6282
 Bishop, L. M., 15362, 15363
 Bishop, L. M., 6258
 Bishop, P. M. F., 12491
 Bishop, P. M. F., 5055
 Bissell, T. L., 17366
 Bissi, J. A., 13222
 Bissonnette, T. H., 3958
 Biss, J. A., 5416, 5664, 17114
 Biswas, K., 1675
 Biswas, M. M., 802
 Biswas, P. C., 5921
 Biswas, H. H., 12598
 Bitancourt, 2798, 11811
 Bitter, O. R., 1384
 Bittner, J. J., 1463, 9583
 Bittner, J. J., 1463, 9583
 Bjerring, T., 2137, 12721
 Bjerring, T., 1806
 Björneboe, M., 4211
 Björneboe, M., 11540, 13398
 Björneboe, M., 13728
 Björneboe, M., 8490
 Blaauw, A. H., 10217
 Blaauw, A. H., 3617
 Blaauw, A. H., 11809, 14924
 Black, A., 2054
 Black, A., 10963, 10964, 16446
 Black, A. N., 9805
 Black, E. C., 10930, 12643
 Black, J. H., 17121
 Black, L. A., 2650
 Black, L. A., 10068, 10075
 Black, L. M., 3119
 Black, L. M., 3169, 10857
 Black, S. A., 3596
 Black, S. H., 8254
 Black, W. C., 9846
 Black, W. H., 5977
 Blackie, W. J., 10332
 Blackie, W. J., 2820
 Blacklock, D. B., 15914
 Blackman, M. W., 10590
 Blackmon, G. H., 1229, 1230
 Blahd, M., 9958
 Blair, A. W., 1221
 Blair, A. W., 13794, 15528
 Blair, D. M., 14161
 Blair, D. S., 2979
 Blair, E. A., 447, 9483
 Blair, G. W. S., 4416
 Blair, H. A., 468, 11165
 Blair, J. E., 15411
 Blair, R., 16824, 16825
 Blair, W. F., 111, 1822
 Blair, W. F., 10655, 10656, 18105
 Blair, W. S., 8455
 Blaisdell, D. J., 3169, 15884
 Blaisdell, F. E. Sr., 6868, 12342
 Blake, F. G., 15182
 Blake, H., 2220
 Blake, J., 5418
 Blake, J., 10820, 12634
 Blake, M. A., 2986
 Blake, M. A., 6506, 11982A
 Blake, M. A., 13864, 13865
 Blake, S. F., 2828A
 Blake, S. F., 18751
 Blake, S. T., 1837
 Blakeslee, A. F., 8925
 Blakeslee, A. F., 8926, 16191
 Blalock, A., 5713
 Blalock, A., 10896, 11166
 Blalock, J. F. Jr., 7339
 Blanc, A. C., 9719
 Blanc, G., 956
 Blanchard, E. W., 5610
 Blanchard, L., 8317
 Blanchet, E., 15529
 Blanco, C. E., 1284
 Blancou, L., 16062
 Bland, E. F., 4068, 14776
 Bland, J. O. W., 8192
 Blandau, R. J., 8043
 Blank, I. H., 10834, 10862
 Blank, L. M., 1481, 3169
 Blanton, F. S., 8796, 14057
 Blatherwick, N. R., 14537
 Blatt, A. H., 10284
 Blaurock, M., 7088
 Blaustein, J., 14647
 Blauvelt, L., 4707
 Blaydes, G. W., 16116
 Blazso, S., 9832, 9893
 Bledsoe, R. P., 15530
 Blegen, E., 7291
 Blegov, I. M., 4039
 Blessmann, G., 12489
 Bleyer, A., 413
 Blicke, F. F., 9538
 Blicke, F. F., 9539, 11210
 Bliks, M. S. C., 5580
 Blinks, L. R., 3095
 Blish, M. J., 15111
 Bliss, C. I., 12643
 Bliss, C. I., 14789, 14790
 Bliss, D. E., 5000
 Bliss, E. A., 2299
 Bliss, E. A., 2654, 4549, 9914
 Bliss, M. C., 17552
 Bliss, R., 5409
 Blith, M. D., 7451
 Blitstein, I., 16554
 Blix, G., 9164
 Bloch, F., 11604
 Bloch, H. I., 12643
 Bloch, P. W., 3618
 Bloch, R., 17560
 Bloch, R. H., 15294
 Block, R. J., 1913, 5447
 Block, R. J., 7977, 9111, 14480
 Blodgett, C. O., 2847
 Blodgett, E. C., 15835
 Blodgett, F. M., 3120
 Blokhuis, J. L. W., 4881
 Blommers, J., 14464
 Blomquist, H. L., 8418
 Bloom, D., 11619
 Bloom, F., 14668
 Bloom, M., 7084
 Bloomfield, J. J., 7920
 Bloor, W. R., 6325
 Blossom, P. M., 10657
 Blotner, H., 1922, 9631
 Blount, R. F., 9281
 Blubaugh, L. V., 17447
 Blumel, C. S., 653
 Blum, H. F., 12643
 Blum, H. F., 10884, 10885, 10886
 Blume, C. A., 5194
 Blume, J. M., 11950
 Blumenfeld, C. M., 55
 Blunn, C. T., 693, 14608
 Blyth, J. S. S., 2160, 5341
 Boak, R. A., 4652
 Boardman, W. W., 2669
 Boatright, W. C., 17610, 17611
 Boaz, T. G., 9799
 Bobb, A. C., 13865
 Bobb, M. L., 12173
 Bobeau, 702
 Böcher, O. E., 11676
 Böcher, T. W., 117
 Bochet, 10234
 Bochet, M., 13249
 Bock, E., 11575, 12245
 Bock, H. E., 2426
 Bock, K. A., 377
 Bock, S., 6777
 Bockowska, M., 8665, 8666
 Bodansky, M., 3959
 Bodansky, M., 7435, 12714
 Bodansky, O., 12662
 Boddington, G. D. M., 9920
 Bode, H. R., 6537, 13780
 Bodecker, C. F., 5908
 Bodenheimer, F. S., 112
 Bodenstein, D., 9781
 Bodenstein, D., 9782, 12541
 Bodenstein, D., 13337, 17061
 Bodenstein, W. G., 12385
 Bodian, D., 15217
 Bodian, D., 15229, 16969
 Bodily, H. L., 4708
 Bodine, J. H., 1889, 1904
 Bodine, J. H., 12643, 13342, 14459
 Bodine, J. H., 16308, 17062, 17063
 Bøe, G., 571
 Bøe, J., 2776
 Bøe, J., 4433, 17122
 Boeck, W. C., 12874
 Boedijn, K. B., 8387
 Boedyn, K. B., 4638
 Boehm, F., 7416
 Boehringer, F., 9768
 Boell, E. J., 753, 7308
 Boenjamin, R., 13399
 Boer, S. de, 11161, 11162
 Boerger, A., 13795
 Boerner, F., 7292
 Boerner, F., 11650, 11651
 Boernstein, W. S., 12643
 Boestad, G., 225
 Boetgehold, H., 16117
 Bogart, L. v., 654, 1542
 Bogart, R., 3736, 12557
 Bogen, E., 8255
 Bogen, H. J., 1383
 Böger, A., 9534, 9575
 Bogert, C. M., 6981
 Boggess, T. S., 13007
 Bögh, H., 11933
 Bogin, M., 3768
 Bogue, J. Y., 7818, 7706
 Boguslawski, E. v., 4818
 Bohanan, E. H., 3960
 Bohart, G. E., 6890, 6919
 Bohart, R. M., 18022
 Bohlander, H., 923
 Bohm, E., 8075
 Böhm, F., 9833, 13141
 Bohmann, L., 16106
 Böhm, W., 14604
 Böhmig, R., 7822
 Bohr, D. F., 4038
 Bohr, D. F., 9494, 12643
 Bohstedt, G., 1173
 Bohstedt, G., 1177, 11472, 17068
 Boillot, Y., 12933
 Boisseaumarié, P. L. de, 15585
 Boissevain, C. H., 2750, 6798
 Boissezon, J. de, 1377
 Boivin, A., 803
 Boivin, A., 2518, 13400
 Boje, O., 14937
 Bojlen, K., 1785
 Bokenham, N. A. H., 5971
 Bokor, R., 6528, 6529
 Bolden, F. E., 37
 Boldt, E., 8710
 Boldyreff, W. N., 12643
 Bole, B. P. Jr., 5222, 5240
 Boley, L. E., 6717
 Bolin, D. W., 1412
 Bolin, D. W., 8456, 10218
 Bolin, D. W., 13796, 15127
 Bolin, O., 15536
 Bolin, R. L., 8806, 16049
 Boling, J. L., 3792, 7604
 Bolle, F., 2848
 Bollen, W. B., 1045
 Bolliger, A., 7578
 Bolling, D., 5447
 Bolling, D., 9111, 14480
 Bollmann, J. L., 3658
 Bollmann, J. L., 7244, 7564
 Bollmann, J. L., 12643, 13089
 Bolomey, P., 11764

- Bolsunov, I. I., 18797
 Bolton, J. H., 13401
 Bolton, R. S., 6259
 Bomskov, C., 5581, 7965
 Bonar, L., 2728, 17405
 Bonciu, C., 6178
 Bond, C. J., 2155
 Bond, G. C., 4434
 Bond, R. M., 4534, 17346
 Bond, R. M., 14426, 18088
 Bondar, G., 2980
 Bonde, R., 17763
 Bonet-Maury, P., 6085
 Bonifaci, 14388
 Bonifaci, P., 18170
 Bonin, G. v., 677
 Bonis, E. de, 4945
 Bonisteel, W. J., 6538
 Bonnard, A., 15088
 Bonne, C., 11631
 Bonnell, D. E., 8765
 Bonner, D., 8088
 Bonner, I. J., 15735
 Bonner, J., 1398, 3066
 Bonoff, K. M., 16555
 Bonsdorff, B. v., 1954
 Bonser, G. M., 7823, 14877
 Bonsma, F. N., 2431
 Bontoux, 14388
 Bontoux, Y., 1370
 Boohar, L. E., 9219
 Boone, L., 3413
 Boor, A. K., 9959
 Booth, V. H., 7880
 Bor, N. L., 8427, 9009
 Borasi, M., 507
 Borden, D., 8242
 Borden, R. J., 2922, 2923
 Bordley, J. 3rd., 477
 Bordley, J. E., 12643
 Borell, A. E., 5230
 Borello, A., 2686
 Borg, J., 6455
 Borg Petersen, C., 17392
 Borgard, W., 2156, 2159
 Borghessa, E., 2468
 Borgström, G., 5582, 12068
 Boriani, A., 7747
 Boris, P., 14791, 16575, 16756
 Borisov, S., 1296
 Borkowski, Z., 14539
 Borkland, J. L., 14162
 Borman, E. K., 4528
 Bornmann, F. v., 10088
 Bornand, G. H., 8446
 Bornand, J., 4882
 Bornstein, W., 13082
 Borrighione, G., 6179
 Borrius, H., 3068, 6581
 Borrer, D. J., 3360
 Borset, O., 1124
 Borsodi, E., 16128
 Borst, J. G. G., 1955
 Borsuk, J., 11388
 Bortels, H., 17422
 Borthwick, H. A., 4928
 Borthwick, H. A., 10818, 12081
 Bortner, O. E., 15552
 Bortz, E. L., 8884, 17254
 Borzask, L., 2545
 Bos, A., 15979
 Bos, J., 14104
 Bos, J. P., 5852
 Bose, S. R., 6063
 Bose, S. R., 1078, 17436
 Boselli, A., 11608
 Bosgard, J. D., 12921
 Bosma, B. D., 5015
 Bosman, L. P., 7824
 Bosnjak, K., 17545
 Bosshard, W., 1893
 Bosshard, D. K., 17067
 Boswell, V. R., 1251
 Bot, G. M., 12092
 Bothe, W., 12736
 Botta, B., 17448
 Böttcher, R., 18976
 Bottomby, A. O., 3793
 Bouckaert, J. J., 9519
 Boudreau, F. G., 14518
 Bougher, A. S., 11812
 Bougy, E., 14357
 Boujart, M., 5775
 Boulenger, E. G., 12471
 Bourdillon, J., 7298, 16645
 Bourgoin, K., 1176
 Bourne, A. W., 13029
 Bourne, M. H., 8945
 Bourne, W., 508
 Bournoire, R. L., 14496
 Bournoure, L., 729
 Boursnell, J. C., 8175
 Bousset, M., 6389
 Boutaric, M. A., 10887
 Bouwers, A., 199
 Bouyoucos, G. J., 13849, 14380
 Boyet, D., 13142, 13143
 Bowcock, H., 14926
 Bowden, R. A., 12071
 Bowen, B. D., 13101
 Bowen, R., 13392
 Bowen, W. J., 12643
 Bower, J. O., 4572
 Bowerman, E. P., 3962
 Bowles, E. A., 11973
 Bowling, J. D., 12100
 Bowman, D. E., 14677
 Bowman, J. J., 11928
 Bowman, K. L., 15145
 Bowman, K. M., 3687
 Bowman, R. O., 16776
 Bowstead, J. E., 14925, 17891
 Boy, J., 2497, 13353
 Boyce, A. M., 8176, 5016, 10388
 Boyce, H. R., 14105, 14106, 15894
 Boyce, H. R., 10456
 Boyd, D. A. Jr., 16942, 16943
 Boyd, E. M., 9112, 9282, 9632
 Boyd, K., 9623, 10888, 11048
 Boyd, M. F., 14609, 14610, 16592
 Boyd, F. T., 1177
 Boyd, G. H., 10481, 15183
 Boyd, J. D., 5904
 Boyd, K., 11266, 15038, 17036
 Boyd, K., 3732
 Boyd, M. F., 5086
 Boyd, O. C., 5087, 5088
 Boyd, T. E., 8169, 14163
 Boyd, T. E., 15589
 Boyd, T. E., 445
 Boyd, W., 12643, 16376
 Boyd, W. A., 566
 Boyd, W. A., 9834
 Boyd, W. O., 2519
 Boyd, W. L., 15053, 15168
 Boyd, W. L., 15862, 15363
 Boyden, E. A., 12643
 Boyden, R. E., 6016, 6017
 Boyer, E. L., 8007
 Boyer, N. H., 12643
 Boyes, J. W., 17553
 Boyland, E., 5801, 11278
 Boyland, M. E., 11278
 Boyle, P. E., 2068
 Boyle, R. W., 4087, 16724
 Boyle, W., 10724
 Boyleston, G. A., 2138
 Boynton, D., 13850
 Boynton, D., 13866, 15587
 Boynton, R. E., 17131
 Bozicebich, J., 17282
 Bozicevich, J., 942, 14192
 Bozler, E., 7244, 12643, 14740
 Bozovaisky, L., 6656
 Braak, J. P., 4961
 Braasch, W. F., 5504
 Bracci-Torsi, C., 6207
 Brace, D. E., 12643, 13178
 Bracelin, H. P., 3422
 Brachet, J., 14949, 15059
 Brack, O. B., 14627, 16593
 Brackeen, L. G., 8883
 Bracken, A. F., 8345
 Bracken, M. M., 4233
 Brackett, S., 5107, 12291
 Bradbury, H. M., 14427
 Bradbury, J. T., 12643
 Bradbury, J. T., 12934, 14262
 Bradford, F. C., 8491, 10220
 Bradford, W. L., 11632
 Bradley, G. H., 10434
 Bradley, H. C., 10853
 Bradley, J. H., 1692
 Bradley, W. B., 14856, 15092
 Bradley, W. H., 17130
 Bradley, W. R., 10916
 Bradshaw, D. B., 15275
 Bradt, G. W., 3534
 Brady, F. J., 14192, 17282
 Brady, St. E., 1315
 Braestrup, A., 16757
 Braestrup, C. B., 12691
 Bragg, A. N., 17037
 Braier, B., 16335
 Brain, W. R., 16687
 Braitenberg, H., 572
 Braley, A. E., 15218
 Brambilla, M., 3043
 Branas, J., 8927
 Branch, C. F., 629
 Branch, H. E., 5736
 Brand, E., 1927, 3676, 3677
 Brand, T. v., 1573, 4709
 Brandenburg, T. O., 11725
 Brandenburger, H., 4571
 Brander, T., 5351
 Brandy, C. A., 957
 Brandreth, E., 6731, 11736
 Brandreth, E., 2924
 Brandstrup, E., 13798, 13799
 Brandt, A. E., 4286
 Brandt, H. W., 1806
 Brandt, W., 1642
 Brandwein, P. F., 10690
 Branham, S. E., 804
 Branion, H. D., 2402, 6020
 Brannon, J. M., 6225
 Brannon, L. W., 8540
 Brannon, M. A., 15705
 Brassfield, T. W., 8435, 4734
 Brassfield, C. R., 12643
 Bratley, C. O., 6876
 Bratley, H. E., 15866, 15889
 Bratley, H. E., 15890, 17848
 Bratley, H. E., 9006
 Bratt, J. F., 3619
 Bratton, A. C., 10863, 13178
 Bratzler, J. W., 14524
 Brauer, A., 765
 Braun, A. A., 10835
 Braun, A. C., 3169
 Braun, A. D., 9189
 Braun, G. L., 8021
 Braun, H., 65, 10378
 Braun, W., 10615
 Brauner, L., 13991
 Brauner, M., 13991
 Bräunert, R., 2681
 Braun-Menendez, E., 7707
 Brauns, A., 6891
 Brauns, E., 6892, 12362, 18001
 Brauns, E., 11475
 Braunstein, A. E., 9089
 Braunstein, A. L., 11331
 Braverman, M. M., 7875
 Bravo, A., 3850
 Bray, M. W., 15684
 Bray, R. S., 7038
 Bray, W. E., 7390
 Brazier, 2700
 Brazzel, Sister J. M., 12875
 Breakey, E. P., 17834, 17974
 Breazeale, J. F., 2969
 Brebion, G., 3774
 Brecher, G., 17325
 Breder, C. M. Jr., 3374
 Breder, C. M. Jr., 3375, 6951
 Bredereck, H., 12103
 Bredis, C., 573
 Brees, B. T., 16556
 Bregger, J. T., 18867
 Brehm, V., 6884
 Brehm, V., 6885, 10568, 10569
 Brehm, K. S., 7135
 Breistroffer, M., 1102
 Breitbach, A., 4010
 Breiting, E., 9720
 Breitung, E., 11434, 17009
 Brekhua, P. J., 4343
 Breland, O. P., 1632
 Bremekamp, C. E. B., 11878
 Bremer, F., 14710, 16688
 Bremer, J. L., 7984
 Brems, T., 1785
 Brencley, W. E., 1407
 Breneman, W. R., 5612, 9283
 Brengola, A., 8897, 10235
 Brennan, J. M., 5056
 Brenner, C., 16419
 Brenning, R., 13102
 Brentano, C., 7428
 Brescia, J., 9683
 Bretey, J., 6083
 Bretschneider, L. H., 13030
 Brett, R. G., 17518
 Brewer, R., 1914
 Brewbaker, H. E., 6468
 Brewer, C. R., 11780
 Brewer, E. G., 1454
 Brewer, J. H., 14497
 Brewer, J. H., 11677
 Brewer, J. I., 730
 Brewig, A., 13992
 Breyer, H. B. G., 4300
 Brezina, E., 16232
 Brice, A. T., 14532
 Bricker, J. W., 12643
 Bridge, E. M., 2287, 7896
 Bridgers, W. H., 947, 13250
 Bridges, C. B., 7112
 Bridges, W., 14289
 Brieger, F. G., 5309, 12519
 Brierley, J., 3464
 Brierley, P., 1699, 3169
 Brierley, W. B., 7075
 Briese, E., 3961
 Briese, R. R., 1316
 Briggs, F. N., 10183, 10285
 Briggs, F. N., 10288, 12104
 Briggs, L. H., 14081
 Briggs, L. H., 10286
 Briggs, R. W., 4385
 Brigham, G. D., 2632
 Brightwell, L. R., 10688
 Brill, J. A., 15010
 Brill, N. Q., 11171
 Brimley, C. S., 14334
 Brimley, H. H., 16050
 Brincker, J. A. H., 17360
 Brink, C. J. H., 12211
 Brink, F., 12643
 Brink, F. Jr., 7244
 Brink, R. A., 12520
 Brinkerhoff, L., 1482
 Brinkerhoff, L. A., 17811, 17842
 Brinkhouse, K. M., 3654, 7338, 7392
 Brinley, F. J., 12770, 12868, 16401
 Brinley, F. J., 8044
 Brinson, G. A., 17601
 Briscoe, P. M., 11090, 12643
 Briskas, S., 10922
 Britton, C. J. C., 14510, 14512
 Britton, C. J. C., 4550
 Britton, J. W., 1543
 Britton, S. W., 15950, 17890
 Britton, S. W., 5214, 7538, 9142
 Britton, S. W., 9194, 12643, 12935
 Britton, W. E., 8641
 Brishkova, K., 10381
 Brizi, A., 17567
 Broadbent, B. H., 17187
 Broadfoot, W. C., 8623
 Broadhurst, J., 11613, 15254
 Broager, B., 3731
 Brobeck, J. R., 12643
 Bröchner-Mortensen, K., 8941, 13008
 Brock, N., 574, 7748
 Brock, V., 6952
 Brock, V. E., 3376
 Brockington, F., 262
 Brocklesby, H. N., 7471
 Brockmann, H., 5578
 Brockmeier, J., 14566, 15685
 Brocks, K., 9318
 Brocq-Roussen, D., 9143
 Broderick, F. W., 9700
 Broders, A. O., 5812, 7579
 Brodie, B. E., 7891, 13178
 Brody, A. L., 12212
 Brody, D. A., 12643
 Brody, H., 11456
 Brody, S., 7393
 Broek, A. J. P. van den, 9721
 Broekhuizen, S., 2921
 Broers, J. H., 557
 Brogden, W. J., 7610
 Brogden, W. J., 12643, 16667
 Brogdon, E., 12643
 Brogan, T., 7248
 Bromberg, F., 14792
 Bromée, F., 8524
 Bromley, S. W., 12205
 Bronfenbrenner, J., 13641, 15226
 Bronk, D. W., 15227, 15250, 15251
 Bronkhorst, J. J., 7244, 12643
 Bronstein, I., 6013, 6014
 Brookes, M. P., 9634
 Brookes, M. H., 16825
 Brookhart, J. M., 12643
 Brooks, C., 13178
 Brooks, D. J., 13166
 Brooks, F. A., 13906
 Brooks, G., 11997
 Brooks, J., 9821, 10889
 Brooks, M., 6991
 Brooks, M. G., 8420
 Brooks, M. M., 3620
 Brooks, T. E., 1084
 Broom, J. C., 8656, 8692
 Brosie, B. B., 7809
 Brosnan, J. J., 445
 Brotncher, R. J., 5711
 Brother, G. H., 11934, 11935
 Broughton, E. A., 13402
 Broughton, F., 2019
 Brouha, L., 10890
 Brouha, L., 11075, 11076, 14639
 Broun, M., 11847
 Brower, E., 4412
 Browder, J., 16839
 Browley, R. E., 5585
 Brown, L. G., 3714
 Brown, A., 14571
 Brown, A. W., 5796
 Brown, A. W. A., 10428
 Brown, B. A., 10180
 Brown, B. A., 11936, 15557
 Brown, B. E., 13808
 Brown, C. C., 15589
 Brown, C. E., 16927
 Brown, C. J. D., 6958, 12621
 Brown, C. P., 15130
 Brown, C. W., 2173
 Brown, C. W., 2175, 2176
 Brown, D. E. S., 12643
 Brown, D. K., 6182
 Brown, D. S., 15588, 15589
 Brown, E., 15545
 Brown, E. F., 9170
 Brown, E. G., 8284
 Brown, E. M., 17741
 Brown, E. W., 2562
 Brown, F. A. Jr., 5604, 14611
 Brown, G. E., 11179
 Brown, G. G., 13868
 Brown, G. T., 10460, 11518
 Brown, H., 4566
 Brown, H. B., 11937
 Brown, H. C., 6718
 Brown, H. E., 8196
 Brown, H. E., 8210, 14260
 Brown, H. R. Jr., 7334
 Brown, I. C., 1220
 Brown, I. C., 11662
 Brown, J. G., 15889
 Brown, J. R., 6180, 15401
 Brown, J. R., 2849, 2850
 Brown, J. S., 14691
 Brown, J. W., 827
 Brown, K. R., 15186, 15757
 Brown, K. R., 12024
 Brown, L. A., 4857, 11960
 Brown, M. G., 16743
 Brown, M. H., 4435
 Brown, M. J., 670
 Brown, M. W., 11419
 Brown, N. A., 6666
 Brown, P. E., 1044, 1049
 Brown, R. A., 8127

- Brown, R. B. 6859
 Brown, R. C. 12643
 Brown, R. H. 7633, 16677
 Brown, R. S. 1605, 12306
 Brown, R. W. 10096, 13717
 Brown, S. M. 2967
 Brown, S. O. 4952
 Brown, W. C. 2482, 9812
 Brown, W. H. 16128
 Brown, W. J. 10591
 Brown, W. R. 7436, 12643
 Browne, J. S. L. 2329, 12643, 12751
 Browne, K. M. R. 8915
 Browne, W. A. 6193
 Brownlee, G. 14793, 16444
 Brownlee, I. E. 15005, 16822
 Brownlee, J. M. 5071
 Broyer, T. C. 4919
 Brubaker, R. W. 5045
 Bruce, E. A. 18752
 Bruce, H. D. 15649
 Bruce, W. G. 5057, 15915
 Bruce, W. L. 15573
 Bruch, H. 16819
 Brucher, H. 5310
 Brücke, F. T. 4104
 Bruckner, I. 11612
 Bruckner, J. H. 13555, 13556
 Bruckner, J. H. 851
 Brückner, W. 3008
 Bruckner, W. H. 11726
 Brunn, H. G. 4083
 Bruns, A. M. 3819
 Brues, C. T. 8994, 12317
 Bruesch, S. R. 5258
 Bruger, M. 6028
 Brüggemann, H. 5978, 11493
 Brüggemann, J. 17389
 Brugi, G. 11389
 Brugman, P. 5505
 Bruhn, J. M. 12643
 Brull, Z. 7903
 Brumpt, E. 11633
 Brun, G. C. 14164, 14165
 Brun, G. C. 4243
 Brunel, J. 7835, 14794
 Brunel, M. A. 3293
 Brunel, M. A. 8587
 Bruner, D. W. 10077
 Bruner, H. D. 11792, 13662
 Bruner, H. D. 13697, 17293
 Bruner, J. S. 3621, 10891
 Bruner, J. S. 12643, 13251
 Bruneteau, J. 9284
 Brunetti, B. 8642
 Brunetti, B. 3255
 Bruni, A. 6181
 Brunner, M. 15174
 Bruno, A. 15836
 Bruno, G. 707
 Brunschwig, A. 13252, 16840
 Brunstetter, B. C. 13895, 15712
 Bruns, E. 14692
 Brunt, D. 16233
 Brush, B. E. 12643
 Bruun, A. F. 2288
 Bruyn, H. L. G. de. 3169, 14070
 Bryan, A. H. 4649, 4650
 Bryan, C. S. 17408
 Bryan, H. 6456
 Bryan, H. 13800, 13801
 Bryan, W. L. 344
 Bryant, C. E. 614, 11290
 Bryant, C. E. 5169
 Bryant, G. W. 5170, 5171
 Bryant, G. W. 7749
 Bryant, J. 11576
 Bryant, J. C. 1217, 17361
 Bryant, S. A. 6618
 Bryson, H. R. 15908
 Buca, H. B. 8259
 Buccardi, G. 16758
 Buchanan, J. A. 9635
 Buchanan, J. W. 7611
 Buchanan, K. S. 11847
 Buchanan, T. S. 15797
 Buchanan, W. D. 14137
 Bucher, G. 12643
 Bucher, K. 550, 7750
 Bucher, R. 1885
 Bucherer, H. 2774, 11786
 Buchet, S. 1165
 Buchholz, E. 13924
 Buchholz, J. T. 6440, 10163
 Buchholz, J. T. 12477, 17511
 Buchman, E. R. 15735
 Buchmann, W. 88, 89
 Buchsbaum, R. 9
 Buchthal, F. 13087
 Buchwald, C. E. 7281
 Buchwald, N. F. 12729
 Buck, A. de. 8657
 Buck, C. Jr. 12621
 Buck, J. B. 90, 6869
 Buck, J. M. 4588
 Buckhannan, W. H. 13856
 Buckingham, P. E. 5534
 Buckle, D. F. 17290
 Bucklev, H. 13178
 Buckley, J. J. C. 1544, 6719
 Bückmann, A. 1859, 3528
 Bucksteeg, W. 10368
 Bucy, P. C. 16841
 Budde, R. N. 540
 Buddin, W. 1418, 15796
 Bue, I. G. 14114
 Bueding, E. 12782
 Buehrer, T. F. 17664
 Buel, J. 1944
 Bueno, P. 11625
 Bugini, F. 11974
 Bugyi, B. 4181, 9285
 Buhl, C. 15900
 Bühler, H. 8009
 Bühler, E. 9722
 Bühler, H. 9983
 Buining, A. F. H. 6396
 Buitlear, L. 720
 Bujaas, Z. 9455, 9456
 Bukantz, S. C. 13403
 Bukey, F. S. 7189
 Büllbring, E. 7677
 Bulger, H. A. 10921
 Bull, H. B. 1886
 Bull, L. 3597
 Buller, A. H. R. 10109
 Bühler Souto, A. 6029
 Bullock, A. A. 10126, 11879, 11880
 Bullock, A. A. 11881, 13752, 13753
 Bullowa, J. G. M. 4436, 8184
 Bulmer, F. M. R. 7922
 Bump, G. 14437
 Bumpus, H. C. 11577, 13534
 Bunch, M. E. 3980, 16668
 Bunde, C. A. 5613
 Bunschuh, H. E. 14633
 Büniger, H. 11476, 11477
 Büniger, W. 11493
 Bunker, J. W. M. 16539
 Bunney, W. E. 834, 13508
 Bunster, E. 3794
 Bunting, H. 16912
 Bunyes, H. 6252, 13663
 Buono, P. del. 15751
 Burack, E. 16657
 Burbank, R. 5630
 Burch, J. C. 11061, 11602
 Burea, B. de. 15951
 Burch, A. B. 8045
 Burch, G. E. 241
 Burch, G. E. 1945, 4095, 7938
 Burch, G. E. 9132, 12643, 13106
 Burch, J. C. 8884
 Burchell, H. B. 11457, 16725
 Burckard, E. 12773
 Burckhardt, W. 805
 Burd, J. S. 13802
 Burdick, H. O. 5651
 Büren, G. v. 3522
 Burford, E. H. 8010
 Burge, E. L. 12643
 Burge, W. E. 12643
 Burger, E. 3144
 Burger, H. 15627
 Burger, J. W. 2157
 Burger, J. W. 5665, 12622, 13031
 Bürger, M. 12498
 Burgers, P. H. 12000
 Burges, A. 13730
 Burges, A. E. 11959
 Burgess, A. F. 1505
 Burian, H. 7639
 Burington, R. S. 12492
 Burk, D. 17426
 Burk, D. A. 7073
 Burk, L. B. 7744
 Burkart, W. 6612, 17644
 Burke, E. M. 16842
 Burke, H. E. 2420
 Burke, J. C. 3720
 Burke, M. 3725, 12643
 Burke, M. 478
 Burke, R. M. 10697
 Burke, R. T. A. 11960, 13856
 Burkenroad, M. D. 3296
 Burkhart, E. Z. 3795
 Burkholder, C. L. 6677
 Burkholder, P. R. 13981
 Burkholder, W. H. 3115
 Burkholder, W. H. 4968, 6299, 6637
 Burkhil, I. H. 10120
 Burleigh, T. D. 10651
 Burlingame, E. M. 998
 Burlingame, P. L. 5950
 Burlingame, R. W. 15303
 Burlison, W. L. 11942, 17588
 Burmeister, H. 7294
 Burmeister, B. R. 5666
 Burn, J. H. 7677
 Burnet, E. 974
 Burnet, F. M. 9835, 11578
 Burnet, F. M. 946
 Burnet, F. M. 8103, 8104, 8193
 Burnet, F. M. 9942, 9943, 17124
 Burnet, L. C. 1205
 Burnham, J. C. 10603
 Burns, E. L. 592, 7536
 Burns, J. 12802
 Burns, J. C. 4572
 Burns, R. H. 2483
 Burns, R. K. Jr. 4836
 Burns, R. K. Jr. 11407, 11408
 Burns, R. K. Jr. 11409, 11451
 Burnside, C. E. 1531
 Burnstine, M. D. 17269
 Buros, O. K. 1807
 Burov, A. E. 975
 Burov, A. E. 14865
 Burpee, C. M. 12643
 Burr, E. G. 1946, 16387
 Burr, G. O. 7436
 Burr, H. S. 200, 201
 Burrell, A. B. 4983
 Burrest, M. 2831
 Burrill, M. W. 10121, 10127, 11864
 Burrill, M. W. 15487, 15488, 15498
 Burrill, M. W. 7537
 Burrill, M. W. 9311, 9312, 12643
 Burrill, M. W. 12955, 14680, 15079
 Burris, R. H. 15766
 Burroughs, R. D. 5417, 14312
 Burroughs, R. D. 14878
 Burrows, H. 3256, 11790
 Burrows, W. H. 2503
 Burrows, W. H. 13856, 17105
 Burstein, C. L. 346, 4105
 Burstein, M. 2250
 Burstein, M. 5734, 5735
 Burström, H. 12098
 Burt, A. S. 17050
 Burt, D. R. R. 6785
 Burt, J. C. 6786, 6787
 Burt, J. C. 14883
 Burt, W. H. 7038
 Burt, W. H. 8855, 8856, 8857
 Burtner, R. R. 509
 Burton, A. C. 7244, 12643
 Burton, A. F. 2289
 Burton, G. W. 10312
 Burton, J. C. 10069
 Burton, R. 6992
 Burwasser, P. 16452
 Burwell, C. S. 3962, 4086
 Busacca, A. 5918, 9472
 Busacchi, L. 16756
 Busanovich, G. M. 7061
 Busck, A. 16040
 Bush, G. L. 8874
 Bush, M. T. 7751, 13178
 Bushland, R. C. 1519, 14138
 Bushnell, E. P. 10722
 Bushnell, F. R. 1482
 Bushnell, J. 11938, 13869
 Bushnell, L. D. 17449
 Bushnell, R. J. 10723
 Busila, V. 4051
 Bussell, R. G. 16502
 Bussmann, K. 17699
 Bussmann, W. 10741
 Bustarret, J. 15821
 Bustarret, J. 15845, 15846
 Butcher, E. O. 3796, 7460
 Butenandt, A. 4182, 16594
 Butler, A. M. 1960
 Butler, C. G. 6598
 Butler, C. L. 16778
 Butler, C. S. 4608
 Butler, E. C. B. 15164
 Butler, E. J. 15438
 Butler, H. F. 12521
 Butler, H. M. 4437, 4710
 Butler, K. D. 8364
 Butler, K. D. 14040
 Butler, R. E. 14428
 Butler, R. E. 4263
 Buttle, G. A. H. 7751, 13178
 Butovitsch, V. 3199
 Butt, E. M. 16759
 Butter, G. 14032
 Butterfield, C. T. 8304
 Butterfield, H. M. 2851
 Buttle, G. A. H. 4551, 17243
 Büttner, K. 3980
 Butts, D. C. A. 4609
 Buvat, J. F. 6102, 6103
 Buxton, R. 3097
 Buxton, C. E. 11117
 Buxton, C. L. 12936
 Buxton, J. B. 11569
 Buxton, P. A. 1514
 Buza, L. v. 8222
 Byers, E. 3398
 Byers, H. G. 2925, 13847
 Byler, W. H. 245
 Bylinko, G. H. 9110
 Byrd, E. E. 5963
 Byrd, E. E. 6788, 17930
 Bystrow, A. P. 16954
 Cabasson, F. 1744
 Cable, R. M. 5106, 6789
 Cabral de Vasconcelles, P. W. 11975
 Cada, E. 4815
 Cadbury, J. W. 8787
 Cadden, A. V. 11864
 Cahane, V. H. 14429
 Cahane, M. 3963
 Cahen, R. 12937, 13183
 Cahill, G. F. 3676, 3677
 Cahill, W. M. 289, 291
 Cahn, A. R. 12443, 16277
 Cahn, T. 3683
 Cahoon, R. 12904
 Cailleur, R. 14166
 Caillois, C. 15628
 Cain, J. C. 9984
 Cain, S. A. 9010
 Cais, J. E. 1317
 Cajlachjan, M. G. 17680, 17681
 Cajori, F. A. 7521
 Calam, C. T. 11761
 Calatroni, C. J. 9584
 Calder, M. G. 8368
 Calder, R. M. 10892
 Calder, R. M. 11518, 11519
 Caidis, P. D. 17830
 Caldwell, A. C. 8479
 Caldwell, A. H. Jr. 18023
 Caldwell, D. W. 12750
 Caldwell, H. W. 7863
 Caldwell, J. 1435
 Caldwell, J. S. 1178, 3345
 Caldwell, M. L. 8592
 Caldwell, N. E. H. 17853, 17854
 Calinisan, M. R. 4984
 Calinisan, M. R. 6645, 17776
 Call, V. D. 15112
 Callan, A. M. 11652
 Callan, E. McC. 6638
 Callan, T. P. 16380
 Callanan, M. E. 17098, 17099
 Callegari, L. 510
 Callenbach, E. W. 15113
 Callison, E. C. 9219
 Callot, J. 2362, 10435
 Callot, J. 12248, 12285, 17929
 Callow, E. H. 9797
 Callow, E. H. 9798, 9799, 10034
 Callow, E. H. 3rd. 15102
 Callow, N. H. 11049, 16595
 Callow, R. K. 9286, 16595
 Calò, A. 1687A
 Calpham, P. A. 1604
 Calseyde, P. van de. 4277
 Caltabiano, D. 9836
 Calthorpe, D. 2982
 Calver, H. N. 14319
 Calvert, P. E. 8887
 Calvert, W. R. 10683
 Calvery, H. O. 8558
 Calvin, D. B. 12643
 Calvin, J. 7072
 Calvin, J. S. 9439
 Calvo, R. 14192
 Calvo Fonseca, R. 6720
 Camacho, T. 14192
 Camara, E. de S. da. 14333
 Cambel, P. 10482
 Cambell, J. A. 2007
 Cambournac, F. J. C. 14167
 Camerman, J. 16519
 Cameron, A. E. 12182, 15916
 Cameron, B. C. 11663
 Cameron, C. D. T. 8465
 Cameron, D. E. 5693, 16726
 Cameron, E. 10405
 Cameron, G. 11613, 15254
 Cameron, G. D. W. 4488
 Cameron, G. R. 3745, 5586
 Cameron, J. W. M. 6702
 Cameron, S. H. 1747
 Camin, E. 6441
 Caminha Filho, A. 6457
 Cammer, L. 9540, 12643
 Camp, A. F. 8618, 14071
 Camp, W. H. 4778, 15499
 Camp, W. J. R. 5787, 13178
 Campaigne, E. E. 18419
 Campbell, A. C. P. 7904
 Campbell, A. D. 2522
 Campbell, A. H. 10110
 Campbell, B. 4310, 4360
 Campbell, D. H. 4543
 Campbell, D. H. 9081, 12649
 Campbell, E. 12663, 15831
 Campbell, E. 12643, 18076
 Campbell, E. H. 2028, 14800
 Campbell, H. 17396
 Campbell, H. B. 17321
 Campbell, H. E. 8223
 Campbell, H. L. 2006
 Campbell, J. 3797, 12643
 Campbell, J. A. 1464, 4580
 Campbell, J. F. 4413
 Campbell, K. 7435
 Campbell, K. N. 12643
 Campbell, M. E. 8388
 Campbell, N. R. 16596
 Campbell, P. S. 11678
 Campbell, R. E. 10406
 Campbell, W. A. 2799
 Campbell, W. G. 6618
 Campos, F. A. 9224
 Camus, A. 11125
 Canaga, B. L. Jr. 5920
 Canale, L. 5895
 Candela, P. B. 8011, 15054
 Candelori, M. 8897
 Candy, R. H. 13925

Cane-Christensen

Cane, R. F., 16268
 Canella, M. F., 14313
 Canellakis, A. P., 6144
 Canelo, C. K., 14956
 Canetti, G., 9973
 Canfield, R. H., 12583
 Canizares, O., 4499, 17344
 Cann, S. D., 11118
 Cannava, A., 2290, 7752
 Canning, J., 4819
 Cannon, D. G., 1590
 Cannon, M. D., 16499
 Cannon, W. B., 4028
 7552, 9072
 10890, 13070
 Canon, H., 15440
 Cansdale, G. S., 3017
 Cantacuzino, I., 1052
 Cantarow, A., 511, 2111
 3798, 3799, 7336
 9075, 9636, 12643
 Canzanelli, A., 12643
 16467, 16468
 Canzoni, R., 5840
 Capinpin, J. M., 4841
 7127, 17568
 Capoor, S. P., 11912
 Cappelletti, C., 1680
 Cappelli, E., 8256
 Cappuccini, G., 15629
 Capurro, J., 6205
 8249, 11644, 13620
 Carabia, J. P., 7
 Carbone, D., 4820
 Carbone, E., 772, 1022
 Carbonnier, H., 8525
 Card, C. G., 2502
 Card, L. E., 5666
 Carden, G. A. Jr., 11164
 Cardin, A., 512
 Cardinell, H. A., 1231, 8491
 Cardon, P. V., 10181
 Cardone, E., 4439, 4651
 Cardose, D. M., 9287, 11579
 Carere-Comes, O., 16999
 Carey, E. J., 13811
 Carey, G., 4803
 Caridroit, F., 9291, 12938
 Carini, A., 12275
 12277, 12278
 Carini, S., 12276
 Carl, M., 4902
 Carlberg, U., 2291
 Carlborg, U., 2664
 Carlen, S. A., 4440
 12643, 14655
 Carleton, A., 16994
 Carleton, H. M., 4088, 4302
 Carillo, J. A., 1666
 Carlinfant, E., 2520, 6030
 Carloni, P., 8897
 Carlson, A. J., 2809
 3621, 7589
 Carlson, B., 8260
 Carlson, B. G., 8262
 Carlson, E. R., 6226
 Carlson, H. E., 9933
 Carlson, J. G., 56, 8912
 Carlson, L. D., 17062, 17063
 Carlson, M. C., 1166
 Carlson, R. L., 13178
 Carlström, B., 2692
 17070, 17384
 Carman, H. F., 2353
 Carman, P. C., 15575
 Carmichael, A., 8554
 Carmichael, G., 441
 Carmichael, E. A., 9514
 Carmichael, E. B., 9414
 12643, 13178
 Carmichael, L., 2216
 15555, 15556
 Carmichael, R., 15027
 Carn, K. G., 1180
 Carnahan, C. T., 12213
 Carne, H. O., 12643
 Carne, W. M., 1232
 Carnerio, V., 13590
 Carnus, 15357
 Caro, G., 12163
 Caroli, J., 12876
 Caroselli, N., 3168
 Carpano, M., 6159
 Carpeni, G. E., 2069
 Carpenter, C. D., 6015
 Carpenter, C. M., 806
 4652, 11580, 15184
 Carpenter, E. J., 17606

Carpenter, F. M., 3372, 3373
 Carpenter, J. R., 10751
 Carpenter, P. G., 16299
 Carpenter, P. L., 2751
 Carpenter, T. M., 275
 276, 277
 12643, 16453
 Carpentier, A., 8369
 Carr, A. F. Jr., 18089
 Carr, C. J., 1818, 2215
 2314, 2757, 3685
 3688, 10980, 13178
 Carr, J. L., 575
 Carr, L. G., 10777
 Carr, R. H., 11508
 Carrante, V., 6627
 6660, 6696
 Carranza, F., 4133
 Carrea, R. M., 7939
 Carreras G., J., 1179, 10182
 Carrick, R., 1609
 Carrodus, A. L., 7578
 Carroll, F. D., 2387
 Carroll, G. H., 17742
 Carroll, J., 15982
 Carroll, J. C., 14023
 Carruthers, C., 4184, 13082
 Carruthers, J. N., 143
 Carryer, H. M., 12877
 Carsner, E., 1482, 6477
 Carstens, H. P., 7592
 Cartault, J., 14496
 Carter, A., 17517
 Carter, B., 13599
 Carter, C. E., 8526
 Carter, D. G., 4821
 Carter, H. B., 5995
 Carter, J. C., 15889
 Carter, J. F., 7084
 Carter, R. A., 13338
 Carter, W., 6646
 Cartland, G. F., 9328
 Carton, P., 16244
 Cartwright, F. F., 16760
 Cartwright, K. St. G., 15441
 Carty, J. R., 12692
 Carvalho, J. C., 14069
 Carver, J. S., 16537
 Cary, M. K., 2389
 Cary, W. E., 9960
 Caryl, C. R., 122814
 Casals, J., 11520
 Casanova, J., 13168, 14835
 Casey, A. E., 5802
 5803, 5814, 16844
 Cash, E. K., 11813, 11814
 Cashmore, A. B., 1180
 Casini, G., 13535, 15952
 Caskey, C. D., 9165, 9166
 Caskey, C. R., 8246
 Cason, J., 2752
 Caspe, S., 4563
 Caspers, H., 12321
 14392, 16017
 Caspersen, J., 10007
 Cassab, A., 3210
 Cassidy, J. V., 5804
 Cassebeer, F. W., 15590
 Cassell, R. C., 3169
 Cassells, D. A. K., 632
 Cassen, B., 12698, 14471
 Cassidy, T. P., 10407
 Castagnoli, B., 3224
 Castaldi, L., 2435
 Castaneda, M. R., 15244
 Castanet, P., 13436
 Castellani, A., 11581
 Castellani, T., 1046
 4646, 6340
 Castellani, E., 2800
 Castelnovo, G., 7585, 12939
 Caster, K. E., 6775
 Castets, G., 3179
 Castetter, E. F., 5271
 Castex, M. R., 14756
 Castigli, G., 2467, 2469
 Castiglioni, A., 1319
 Castillo, E. B., del 7974
 Castleman, B., 5853, 14957
 Castro, A., 13638
 Castro, J. de., 13638
 Catanei, A., 4634
 Catchside, D. G., 5811, 5334
 Catchpole, H. R., 12643
 Cate, J. ten., 446
 Cathcart, W. H., 16461

AUTHOR INDEX

Cathie, I. A. B., 4185
 Cator, G., 13436
 Cattaneo, C., 2521
 5448, 17451
 Cattell, McK., 1956, 13178
 Caulfeild, A. H. W., 6081
 Caulfield, E., 16290
 Caulfield, W. J., 13364
 17409, 17417
 1515
 Causey, O. R., 1619, 6721
 10483, 17959
 Caux, M., 10895
 Cavallero, C., 4636
 6327, 9976
 Cavalli, F., 5779, 16761
 Cavanagh, B., 7505
 Cave, A. J. E., 13316
 Cave, H. W., 6011
 Cave, M. S., 63, 17554
 Cavell, K., 2765
 Cavett, J. W., 7337
 Cawston, F. G., 1545, 2445
 5115, 6790, 9701
 10484, 11424, 12418
 Cazier, M. A., 5131
 6870, 17990, 17991
 Cebulia, R., 2242
 Cecil, R. L., 4610, 9601
 Cedrangolo, F., 5587
 7262, 9167, 16309
 Celestino da Costa, A., 731
 Celino, M. S., 4978, 15828
 Cengia-Sambo, M., 13740, 13741
 Cera, B., 5598, 10970
 Cernaianu, C., 1546
 Cernovshteyn, L., 6810, 6811
 Cerruti, C. G., 12246, 13691
 Cézard, N., 8441
 Chabanaud, P., 8807, 12419
 Chabre, P., 15686
 Chace, F. A. Jr., 9041
 Chadefaud, M., 11815, 14197
 Chadha, S. R., 13528
 Chadwick, C. S., 9357, 12279
 Chadwick, L. C., 15706
 Chadwick, L. E., 8762, 10576
 Chaikoff, I. L., 3695
 3697, 3699
 7448, 14440
 Chain, E., 5494
 7407, 10850
 Chakrabarti, N., 17010
 Chakravarty, M., 6761
 Chalian, W., 6174, 17116
 Chalkley, H. W., 7244
 Chamberlain, E. B., 8821
 Chamberlain, W., 10669
 Chamberlin, F. S., 5035
 Chamberlin, R. V., 5123, 17984
 Chambers, E., 1213
 Chambers, L. A., 13418, 17125
 Chambers, R., 175
 Chambers, W. H., 12643, 14537
 Chamorro, A., 12940, 12941
 Chamet, E. M., 12112
 Champion, H. G., 10778
 Chandler, A. C., 10485, 15176
 Chandler, C., 7093
 Chandler, C. A., 6133, 10078
 Chandler, D. C., 5395
 Chandler, F. B., 13870
 Chandler, J. P., 12643, 14440
 Chandler, W. H., 13871
 Chandra, 11567
 Chandra, S. N., 12236
 Chaney, A. L., 2765
 Chaney, R. W., 17478
 Chang, C.-Y., 14522, 16454
 Chang, E., 10477
 Chang, F. C., 6539, 8285
 Chang, H., 3892, 11077
 11073, 11079, 13009
 Chang, H.-F., 8267

Chang, K. P., 10990
 Chang, M. S., 5331
 Chang, S. C., 17423
 Chang, T. F., 4011
 Changus, G. W., 3695
 Chao, W. H., 7841
 Chapin, J. P., 18058
 Chapman, F. B., 5240, 10816
 Chapman, F. M., 1674
 Chapman, G. H., 6182
 11653, 11671, 17326
 Chapman, P. J., 3173
 Chapman, R. A., 1808
 Chapman, R. N., 13926, 13927
 Chapman, S. S., 8995
 Chapman, S. S., 2022
 Chapman, V. J., 1823, 16253
 Chapman, W. M., 10619
 Chappellier, A., 1877, 16107
 Charaux, C., 8555
 Chard, J. S. R., 161
 Chard, R. D., 9435
 Chardon, G., 14858
 Chargaif, E., 1957
 1958, 3696
 Charipper, H. A., 246
 690, 5896
 Charles, A. F., 2308
 Charles, D. R., 1734, 1762
 Charles, T. B., 8095
 Charles, V. K., 3205
 Charley, V. L. S., 8332
 Charlier, R., 5738
 13146, 16764
 Charlton, F. B., 14012
 Charney, F., 6259
 Charnock, D. A., 14528
 Charpentier, L. J., 12195
 Charr, R., 1335
 Chase, A. M., 12643
 Chase, E. B., 16992
 Chase, F. E., 1035
 Chase, H. B., 12542, 12543
 Chase, H. F., 5739
 Chase, H. Y., 766
 Chase, M. W., 11544, 14440
 Chase, R. E., 8102, 9677
 Chasis, H., 9531, 12643
 Chassagne, M., 2852
 Chatelier, G. G. du., 11913
 Chatellier, L., 976
 Chattas, A., 13193
 Chatterjee, A., 5922
 Chatterjee, C. C., 5484
 Chatterjee, N. C., 14058
 Chatterjee, R. G., 1320
 Chatterji, S. N., 17373
 Chatters, R. M., 1738
 Chattopadhyay, K. P., 15055
 Chauchard, P., 14712, 14795
 Chaudhri, G. M., 10658
 Chauvin, R., 12183
 Chavasse, F. B., 11133
 Chávez, F. R., 4602
 Cheeseman, E. A., 2678
 4174, 10008
 Chelaresco, M., 1548
 Cheldelin, V. H., 17735
 Chen, A. L., 14796
 Chen, C. Y., 13951
 Chen, E. F., 4822
 Chen, G., 5449, 12643
 Chen, K. K., 518, 514
 5761, 13178
 14796, 17271
 Chen, T.-T., 9093
 Cheney, G., 12878
 Cheney, L. L., 15818
 Cheney, R. H., 5912
 Chenoweth, L. B., 3709
 Chenoweth, M. B., 13178
 Chepil, W. S., 10204
 Cherbuliez, E., 5450
 13365, 13366
 Oherian, M. C., 8667
 Chermeson, H., 2882
 Cherrington, V. A., 6237
 Cherry, I. S., 3684, 7338
 Cherry, T. H., 9113
 Chesley, F. F., 3705
 7464, 11029
 Chesley, L. C., 2139
 Chesney, A. M., 15
 16, 2522
 Chess, F., 8684

Chester, K. S., 3169
 Chevalier, A., 6883
 6540, 11867
 Chevalier, R., 15821
 15845, 15846
 Chevallier, A., 7560, 13062
 Chevallier, P., 5827
 Chevallier, R. J., 14731
 Chevas, S., 4399
 Chevallard, L. L., 9185
 Cheymol, J., 14813, 14814
 Chia, K. F., 13009
 Chiarotti, C., 17224
 17225, 17226, 17362
 Chiarugi, A., 18781
 Chiatellino, A., 16700
 Chibnall, A. C., 14021
 Chichester, D. F., 786
 Chick, H., 7477
 Chickering, A. M., 10585
 Child, J. L., 12643
 Child, A. M., 2498, 2719
 Child, G., 14320
 Child, V. G., 17011
 Childs, T. W., 8631
 Chiles, J. A. Jr., 3913
 Chin, K.-S., 13144
 Chin, T. L., 11654
 Chines, S. S., 2931
 Chinn, B. D., 6134, 13669
 Chinn, H., 2388, 10864
 Chino, M., 7137
 Chiodi, H., 3801
 3802, 3803, 3804
 3805, 5614, 16597
 Chiovenda, E., 13743, 13764
 Chiray, M., 13103
 Chistoni, A., 739
 Chitre, R. G., 303
 Chitty, H., 164
 Chitwood, B. G., 3282
 15993, 15994, 17949
 Chitwood, M. B., 3282, 15993
 Ch'iu, P. T. Y., 10009, 11697
 Chiu, S. F., 12232
 Chiu, Y. T., 8662
 Choay, A., 12933
 Chobot, G. R., 7733, 12643
 Chochole, R., 11124
 Choissier, R. M., 11279, 17327
 Cholak, J., 1915
 Chona, B. L., 1427
 Chopra, R. N., 1320, 1321, 5740
 9915, 15185, 15186
 Chopra, R. S., 10236
 Chor, H., 4309, 9623
 Chornock, F., 10998
 Chorris, P., 6722
 Chosson, J., 18104
 Chou, C.-Y., 13010
 Chou, T. Q., 1916
 Chouaiech, M.-S., 12765
 Chouard, P., 12064, 17546
 Choudhri, R. S., 14013, 15742
 Choudhury, S. C., 10949
 Chouela, A., 16335
 Chouke, K. S., 11458
 Chourard, P., 1436
 Chow, B. F., 2523, 12643
 Chow, C. Y., 10546, 17933
 Chowdhury, D. K. D., 12211
 Chranowa, A., 17064
 Christenberry, G. A., 15442
 Christensen, B. E., 17735
 Christensen, B. V., 1322
 1323, 14797, 14798
 Christensen, C., 1097, 1109
 Christensen, E. H., 9133
 9495, 9509, 9510
 9511, 9512, 10965
 10966, 10967, 16572
 16573, 16706, 16721
 Christensen, F., 2595
 Christensen, H. I., 13610, 17292
 Christensen, J. F., 8105, 17892
 Christensen, J. T., 532
 Christensen, W. B., 6260

- Christiaens, L., .13520
 Christian, H. A., .406, 11679
 Christian, M. B., .5037
 Christian, W., .3565
 Christiani, A. F. V., .7825, 7826
 Christiansen, M. J., .762
 Christiansen, W. G., .9557
 Christianson, O. O., .16726
 Christie, J. R., .10547
 15995, 17772, 17950
 Christie, R. V., .7530
 Christopher, E. P., .1233
 Christophers, S. R., .15953
 Christophersen, E., .6431
 Christy, B., .3423
 Christy, B. H., .12437
 Chrysler, M. A., .10164
 Chrzasczcz, T., .17397
 Chu, F. T., .7580
 8138, 9801
 Chu, H. I., .10990, 14669
 Chu, H. J., .4552, 8689
 Chu, H. P., .1916
 Chu, I. K. C., .2592
 Chu, J. P., .11055
 Chu, T. J., .2070
 Chubiniidze, A. P., .807
 Chucka, J. A., .11939, 13803
 Chung, H., .14168
 Chung, H. L., .4581
 8285, 10023, 10024
 12250, 17893, 17896
 Church, C. F., .13404
 Chute, A. L., .7707
 Chweitzer, A., .14713, 14714
 Cía, F. M., .7908
 Ciampi, N., .6207
 Ciaranti, E., .9199
 Cicardo, V. H., .2131, 14799
 Cicchitto, A. M., .1547
 8635, 8686
 Ciferri, E., .1181
 Ciferri, R., .1074
 2796, 2800, 4635
 4636, 4637, 4638
 4646, 8897, 10035
 12130, 13731, 13744
 15469, 15531, 17487
 Ciglar, M., .7433
 Cilento, R., .17363
 Cingolani, M., .1687A
 Cioccolari, A., .2340, 5795
 Circle, S. J., .13837
 Cisbani, R., .7167
 Cithbert, F. P., .9195
 Cittadini, A., .8458
 Ciuca, M., .1548, 1549
 Ciurea, I., .3335
 Clavin, H., .1956
 Clamann, H. G., .14700
 Clampt, J. M., .2616
 Clananah, D. L., .8460
 Clancy, C. F., .6239
 Clancy, C. W., .3462
 Clapham, A. R., .16251, 16254
 Clapham, B. N., .16254
 Clapham, P. A., .1604
 Clapp, D. B., .13703
 Clarenz, L., .14722
 Clark, A., .3477, 13145
 Clark, A. F., .12411
 Clark, A. H., .10552
 12391, 14224
 Clark, A. J., .11080, 11211
 Clark, A. L., .15276
 Clark, A. R., .9919
 Clark, B. B., .7754
 7784, 12643, 14800
 Clark, C. A., .17867
 Clark, C. F., .1789
 4848, 10862
 Clark, C. P., .4097
 Clark, D. E., .12643
 Clark, E., .17967
 Clark, E. G., .11680
 Clark, E. L., .7940
 Clark, E. R., .7940
 Clark, F. E., .6300
 Clark, F. H., .5215
 8946, 12544
 Clark, F. N., .9050
 Clark, G., .2221
 2240, 16599
 Clark, G. L., .1041
 1331, 3103, 9040
 Clark, H. F., .17346
 Clark, H. L., .10553
 Clark, J., .5081, 5216
 Clark, J. A., .1182
 Clark, J. C., .5023
 Clark, J. H., .5467
 6661, 7244, 9076
 Clark, K. J., .16592
 Clark, L. F., .12391
 Clark, N. A., .15736
 Clark, O. H., .5401
 Clark, P. C., .12643
 Clark, P. F., .965, 8362
 Clark, R., .8320
 Clark, S. L., .2222, 16689
 Clark, W., .10678
 Clark, W. A., .2926
 Clark, W. E. LeG., .13071
 16970, 16971, 17024
 Clark, W. F., .7334
 Clark, W. G., .7506
 9541, 12643
 Clarke, C. H. D., .4796
 Clarke, C. W., .15295
 Clarke, G. L., .9041, 12606
 Clarke, I. D., .6458
 Clarke, L. F., .9759
 Clarke, M. F., .1183
 Clarke, S. H., .15630
 Clarke, T. E., .3539, 18090
 13252
 Clarke, T. H., .1959
 Clarsen, J., .13405
 Clauber, K. W., .13405
 Claude, A., .576, 11521
 Claus, E., .1740
 Claus, P. E., .3446, 4198
 Clausen, C. P., .8668
 Clausen, H. J., .14701
 Clausen, J., .5260, 16402
 Clausen, N. M., .13178, 15963
 Clausen, R. T., .2815
 Clauss, W., .13367
 Claussen, F., .8013, 9723
 Clavel, C., .2576
 6100, 8151, 15481
 Clavery, H. O., .4106
 Clawson, B. J., .2376, 11167
 Clay, H. L., .8637
 Clay, S., .6507
 Clay, T., .6941
 Claycomb, G. B., .5887
 Claydon, T. J., .6274
 Claypool, L. L., .14014
 Clayton, C. N., .3169, 17782
 Clayton, E. E., .1455
 1456, 3169
 Cleare, L. D., .8459
 8647, 15925
 Cleary, R. V., .5519
 Cleo, D. A., .6370
 Cleghorn, R. A., .7827
 12643, 13000
 Clein, N. W., .4175, 17187
 Cleland, E. R., .3279, 3298
 Cleland, J. B., .3280
 Clemence, L. W., .543, 9934
 Clemens, W. A., .5400, 5424
 Clementi, A., .9397
 Clements, D. I., .3806
 Clements, F. E., .12564
 Clements, F. W., .9168
 Clements, H. F., .3086
 14024, 14025
 Clemmesen, J., .16845
 Clemo, G. R., .10287
 Clerc, W. O., .3623
 Clero, O., .11449
 Clero, W., .11449
 Clen, H., .12392
 Cleve-Euler, A., .2782
 Cleveland, D. A., .4309
 Cleveland, L. R., .10515, 10516
 Clifton, C. E., .10079, 13692
 Clinch, P., .8609
 Cline, J. E., .9108
 Clinkard, L., .1285
 Cloetens, R., .12680
 Clore, W. J., .18872
 Clough, O. W., .6032
 Clouston, T. W., .16173
 Clutterbuck, P. W., .11761
 Cluzet, J., .479
 Coakley, J. D., .12643
 Coates, M. S., .11622
 Coates, W. H., .17618
 Coatsney, G. R., .3257
 Cobb, S., .2417, 7088
 Coburn, A. F., .2377
 Coburn, G. A., .11357
 Cochet, G., .10486, 11643
 Cochran, F. D., .66, 5308
 Cochran, H. L., .8928, 17625
 Cochran, L. O., .3121, 14085
 Cochran, W. G., .1535
 Cochran, R. G., .558
 Cockayne, E. A., .7161, 13196
 Cockcroft, J. D., .7819
 Cocke, E. C., .6033
 Cockerell, T. D. A., .34
 1633, 6920, 6921
 10608, 14265, 18024
 Cockerham, G., .6647
 Cockerham, K. L., .5070
 Cocu, M., .11727
 Code, C. F., .14498, 14499
 Coeyer, F. de., .1415
 Coffee, A., .12643
 Coffman, F. A., .1205
 1208, 17569
 Coffman, J. R., .14964
 Coggeshall, L. T., .6128
 Coggeshall, S. B., .18533, 18536
 Coghill, R. D., .2524
 Cohen, A., .743
 Cohen, A. C., .7921, 14985
 Cohen, A. E., .6034
 Cohen, A. G., .16892
 Cohen, B. B., .4910
 Cohen, H., .16294, 16600
 Cohen, I., .4161, 4163
 14861, 14910, 17670
 Cohen, J., .2453
 Cohen, J. A., .11050
 Cohen, J., .2263
 Cohen, M., .1500, 7640
 Cohen, M. B., .6035
 11095, 15131
 17157, 17187
 Cohen, M. E., .502
 Cohen, P. P., .10865, 12643
 Cohen, S., .11095
 Cohen, S. M., .6036
 Cohen, S. M., .7859
 Cohen, S. L., .6037
 Cohen, W., .16822
 Cohn, A. E., .11168
 Cohn, D. J., .10893
 Cohn, E. J., .16291
 Cohn, E. T., .10836, 14568
 13262
 Cohn, I., .15132
 Cohn, J., .15132
 Cohn, W. E., .10836, 12824
 5432
 Cohn, W. M., .1119
 Cohe, E., .15433
 Coker, W. C., .15443, 17506
 Cokkinis, A. J., .4553, 4554
 6871, 12343
 Colas, G., .5217, 8858
 Colbert, E. H., .15591
 Colby, A. S., .17570
 Colby, W. G., .3850
 Cole, A. C. Jr., .5127, 6922
 Cole, C. L., .8065
 Cole, F. J., .7074
 Cole, H., .9181
 Cole, H. A., .10805
 Cole, H. H., .3910, 11103
 Cole, J. R., .1457, 3145
 Cole, J. S., .2927, 13851
 Cole, K. S., .1391
 11136, 11137, 12643
 Cole, L. J., .12545
 Cole, P. A., .9256
 Cole, R. C., .11961
 Cole, R. K., .16545
 Cole, V. V., .526, 3807
 Cole, W., .12931
 Cole, W. H., .2745, 5678
 Cole, W. S., .10517
 Colebrook, L., .8115
 Colefax, A. N., .6973
 Coleman, O. H., .10338
 Coleman, D. A., .4855
 Colin, H., .6442
 6459, 14357, 15532
 Colla, S., .1355, 15707
 Collander, R., .3069
 Colletette, C. L., .12494
 Colles, F. A., .5500
 Collett, E., .7466
 Collette, L., .10244
 Collier, F. O., .11687
 Collier, W. A., .808
 809, 1011, 6183
 9916, 9944, 11582
 11681, 12406, 16893
 Collin, R., .10630, 14639
 Collings, W. D., .9288
 Collins, D. A., .12643
 Collins, E. R., .15333, 17607
 Collins, L. H. Jr., .4303
 Collins, S. D., .977
 Collins, V. J., .12997
 Collins, V. L., .11033
 Collip, J. B., .3808
 3874, 3878, 3887
 4285, 5609, 5813
 11067, 11068, 12643
 Colombiás, F. H., .14496
 Colombo, G., .8106
 Colowick, S. P., .5451, 9251
 Colwell, E. V., .6301
 Colwell, W. E., .12056, 15835
 Comacho, T., .6723
 Coman, A., .2890
 2891, 13765
 Coman, D. R., .5819, 13407
 Comber, N. M., .11962
 Combes, T. J., .9337
 Combiesco, C., .13408
 Combiesco, D., .13408
 Comboni, S., .15697
 Combs, W. B., .17411
 Comeau, W. J., .5712
 11169, 11204, 13109
 Comee, R., .9208
 Comfort, M. W., .16762
 Comin, D., .1234, 2983
 Cominole, B., .7754
 7784, 11235
 Commoner, B., .176, 12107
 Companetz, V., .16409, 16410
 Compton, A., .8194
 Compton, C. C., .3187
 Compton, J., .3101, 17736
 Compton, K. T., .8881
 Comrie, A., .6001
 Comrie, L. C., .8859
 Comroe, B. L., .2269
 4303, 7345
 Comroe, J. H. Jr., .13105
 Comsa, G., .13254
 Comstock, J. A., .5141, 5142
 Comstock, R. E., .11096
 Comte, P., .16001
 Conant, R., .3401, 14289
 Conard, H. S., .9011
 Condit, C., .17479
 Condon, H. M., .1401
 Condon, H. T., .8826
 14293, 14294
 Cone, J. F., .6227
 Congress, M. A., .6159
 Connell, L., .8, 1146
 Conn, H. J., .1047
 2753, 16118
 Conn, J. W., .11183
 Connal, K. I., .7823
 Connell, W. F., .9632, 9633
 Conner, J. A., .11546
 Conners, I. L., .10355, 12229
 Connor, C. L., .575
 Connor, W. L., .8373
 Conrad, G. M., .3380, 6954
 Conrad, H. S., .10748
 Conrad, J. P., .2928
 Conrad, M., .17727
 Conrad, R. M., .412
 5945, 11509
 13888, 15114
 Conrad, L., .1113
 Conrey, G. W., .2971
 Constance, L., .3435
 17519, 17520
 Constantinesco, D., .46
 14006, 14086
 Constantinesco, M., .46
 14006, 14086
 Constantinesco, N., .6199
 Constantino, G., .12174
 Conte-Marotta, R., .7561
 Conti, L. F., .11728
 Contralto, A. W., .11170, 11195
 Conway, E. A., .11522
 Conway, E. J., .10851, 10866
 Conway, H., .4443
 Conwell, D. V., .4270
 Cook, C. A., .4108, 4109
 Cook, D. B., .14312, 14431
 Cook, D. H., .13793
 Cook, E. F., .3424
 Cook, E. S., .515
 1388, 2040
 Cook, E. V., .14465
 Cook, F. E., .16510
 Cook, F. M., .13178
 Cook, G. M., .2065
 Cook, H. T., .3169
 15867, 15891
 Cook, J. W., .16537
 Cook, M. T., .14059
 14060, 14061
 14062, 14066
 Cook, O. F., .8929
 Cook, P. L., .10165
 Cook, R., .12546
 Cook, R. C., .1741, 6994
 Cook, R. L., .8480, 11949
 Cook, W. H., .1031
 13670, 17093
 Cook, W. R. L., .11832
 Cooke, B., .15078
 Cooke, H. B. S., .3724
 Cooke, M. T., .6993
 Cooke, R., .10851, 10866
 Cooke, R. A., .15142, 15147
 Cooke, W. B., .15464
 Cooley, J. S., .3169
 Cooley, R. A., .6853, 6854
 Coolidge, T. B., .3599
 Coombes, A. N., .2984
 Coombs, H. C., .12643
 Coon, J. M., .12942
 Coonen, L. P., .5286
 Coons, J. J., .17126
 Cooper, C. B., .12547
 Cooper, D. C., .49
 5312, 15518
 Cooper, E. A., .1053
 Cooper, F. B., .2656, 4555, 4556
 7764, 9921, 13238
 13537, 13540, 17251
 Cooper, F. S., .7281
 Cooper, J. F., .2929
 Cooper, J. R., .17626
 Cooper, K. W., .8913
 Cooper, L. H. N., .1845
 1846, 1847, 10792
 Cooper, M. L., .17333, 17364
 Cooper, R. E., .4804
 Cooper, R. H., .3323
 Cooper, W. C., .15737
 Cooper, W. L., .3550
 Cooper, W. S., .7191
 Cooper, Z. K., .57
 Cope, C. L., .2119
 Cope, O., .9289
 Copeland, E. B., .8421
 Copeland, H. F., .2853
 4805, 5267, 16135
 Copeland, L., .13360
 Copenhagen, W. M., .5946
 Copley, A. L., .10894
 Coppée, G., .14702, 14703
 Coradini, P., .3219
 Corbet, R. E., .5553
 Corbett, A. C., .17408
 Corbett, W. J., .2720, 13368
 Corbin, K. B., .7961, 7962
 Corbus, B. C., .9985
 Corcoran, A. C., .5483
 11086, 12643, 13011
 Cordier, D., .3624
 9271, 10895
 Cordier-Goni, P., .162
 Cordon, T. C., .4703
 6293, 6294, 8350
 Corey, E. L., .7538
 9194, 12643, 12943
 Cori, C. F., .186
 5451, 9251, 14448
 Cori, G. T., .186
 5451, 14448
 Corkill, A. B., .14533
 Corkill, N. L., .5847
 Corlette, M. B., .3962

- Corley, E. C. 12808, 14531
 Cornbleet, T. 8942
 Cornell, R. L. 15358
 Cornely, P. B. 978
 Corner, H. H. 17385
 Cornford, C. E. 8492
 Cornil, L. 14912
 Cornsweet, A. C. 2174
 8981, 9436
 Corper, H. J. 2525
 Corradini, P. 8216
 8217, 8675
 Corran, H. S. 16310
 Correa, L. M. 13224
 Correll, D. S. 1098
 Correll, H. B. 8959
 Correll, J. T. 2081, 2082
 Corrigan, K. E. 12643
 12693, 14471
 Corsin, P. 2905
 4722, 10680
 Corson, J. F. 6724
 12247, 14169
 14170, 15954
 Cort, W. W. 6107
 Cortell, R. 12643
 Corti, R. 15511
 Cortois, J. 11762
 Corvin, A. 13317
 Corwin, W. C. 5615
 Cory, E. N. 12214
 17869, 17886
 Coryell, H. N. 8680
 Cosby, S. W. 17606
 Cosijn, A. J. 14198
 Cossio, P. 4058
 Costa, E. da. 7589
 Costa, P. 14192
 Costello, D. F. 17571
 Costello, D. P. 6791
 7249, 8054
 Costello, H. M. 6791
 Coster, C. 15681
 Coster, I. C. 106
 Cosway, C. A. 8434
 Costello, S. 5427
 Coten, L. 9961
 Cottam, C. 5207
 9064, 9065, 18090
 Cottam, W. P. 13754
 Cotter, E. F. 11614
 Cotton, A. G. 13358, 13359
 Cotton, B. O. 3295
 Cotton, W. E. 4538
 Couch, J. F. 1316, 10183, 10285
 10288, 12104, 17665
 Couch, J. N. 10111
 15444, 15445
 Couch, J. R. 15125
 Coulon, A. de. 610
 Coulson, E. J. 9837
 Coulter, S. T. 17411
 Count, E. W. 5923
 17012, 17013
 Courrier, R. 9291
 12944, 13093, 14612
 Court, D. 15277
 Courtenay-Latimer, M. 6995
 Courtice, F. C. 14584
 Courtney, K. O. 17365
 Courts, F. A. 7678, 14693
 Coutelet, F. 10486, 12248
 Coutts, J. R. H. 8979, 11966
 Couturier, A. 3341
 Covacic-Ulmann, F. 2251
 Cozas, G. 15484
 Cozell, G. 10487
 Cozell, W. P. 4001
 Cover, W. L. 2322
 Cowan, D. 1875
 Cowan, I. McT. 3977
 3402, 5218, 12444
 Cowan, J. M. 6387
 Cowan, R. J. 11665
 Cowan, S. T. 4441, 15138
 Coward, K. H. 11003, 16511
 Cowart, F. E. 4874, 13873
 Cowdry, E. V. 15253
 Cowgill, G. R. 3729
 5848, 10332, 14544
 Cowles, P. B. 979
 Cox, A. J. 15270
 Cox, G. J. 9134
 Cox, G. M. 16226
 Cox, H. R. 4582
 4583, 4584, 15184
 Cox, J. A. 1492, 17855
 Cox, L. B. 7828, 7829
 Crabb, E. D. 9684
 Crabtree, H. G. 5470
 Cracas, L. J. 5565
 Craft, W. A. 8465
 Crafts, A. S. 4936, 10166
 10386, 12108, 12111
 13804, 15517, 17712
 Crafts, R. C. 2120
 Cragg, R. C. 9694
 Craig, C. F. 8338
 Craig, J. M. 3901
 Craig, J. S. 17049
 Craig, L. C. 8560, 17666
 Craig, P. E. 2375
 Craig, R. 13025
 Craig, R. L. 11331
 Craig, W. McK. 1059, 11295
 Craighead, F. C. 14126
 Craigie, E. H. 660
 9635, 11387, 11390
 Craigie, J. 4442
 Crainicianu, A. 14678
 Cralley, E. M. 1481
 Cram, E. B. 5089, 10488
 Cramer, F. K. 2579
 Crampton, E. W. 15534
 Crandall, B. S. 11262, 15890
 Crandall, F. K. 13874
 Crandall, L. A. 3684, 7464
 Crandall, L. A. Jr. 8705
 7338, 11029, 12643
 Crandall, L. S. 16063
 Crane, H. L. 12534
 Crane, M. P. 10727
 Crane, M. P. 4303
 Crane, N. F. 4157
 Cranston, E. M. 11574, 13178
 Craufurd-Benson, H. J. 6709, 6710
 Crawford, B. L. 12879
 Crawford, H. J. 12330
 Crawford, J. H. 13115
 Crawford, M. P. 7713
 Crawford, R. 12363
 Crawford, S. C. 342
 Crawford, T. 2341
 Creaser, C. W. 11051, 18041
 Creasey, L. B. 1126
 Creech, E. M. H. 16846
 Creech, H. J. 16852
 Creed, R. H. 11005
 Creighton, H. B. 15703
 Creighton, J. T. 5071
 Creighton, M. 2524, 5296
 Creighton, M. M. 17444
 Cremer, E. 16492
 Crépin, O. 15821
 15845, 15846
 Crescitelli, F. 4002
 4003, 12643, 14704
 Creskoff, A. J. 878, 5823
 Crespin, I. 5120
 Crespo, E. P. 7905
 Cress, M. 3169
 Cressman, L. S. 5222
 Cressman, R. D. 5713
 10896, 11166
 Cresson, E. T. Jr. 8788
 Creswell, L. 2985
 Crête, P. 11914
 Crezotzu, P. 4794
 Crevelsd, S. van. 7382
 Crew, F. A. E. 7113
 11097, 16161
 Crew, R. S. 9646
 Cribbs, J. E. 13718
 Cridger, J. O. 9270
 Crigler, E. F. 11148
 Crippin, P. D. 2526
 11523, 16503
 Crismon, C. A. 11212
 Crismon, J. M. 2292
 Crist, J. W. 10746
 Cristea, R. 12046
 Crittenden, P. J. 14801
 Crivellari, D. 8897, 17645
 Crocker, C. G. 8203
 Crocker, E. S. 2436
 Croisier, M. 2333
 Croizat, L. 1127, 10128
 Cromer, D. A. N. 17646
 Cronkite, E. P. 9324
 Crook, G. W. 2671
 Crook, R. L. 14171
 Crooke, A. C. 2439, 2440
 Crooks, G. C. 2721, 10036
 Crosby, E. C. 9676, 15011
 Crosby, W. H. Jr. 7755
 Crosier, W. 8626
 Crosier, W. F. 1458
 Crossman, A. M. 246
 Cross, D. O. 16149
 Cross, E. C. 5240
 Cross, G. L. 6443
 Cross, J. C. 1717
 Cross, S. X. 8687
 Cross, W. E. 6460
 6461, 10184
 Crossley, V. 4443
 Crossmon, G. C. 5919
 Crosthwait, S. L. 12208, 12214
 Crouch, J. E. 7581
 Crouch, R. L. 678
 Crow, J. F. 7990
 Crowder, J. A. 17664
 Crowley, M. L. 14007
 Crowley, J. H. 11728
 Croxton, W. C. 3501
 Crozier, W. J. 2197, 2198, 2199
 2200, 7628, 7629
 7630, 7631, 7632
 11125, 13052, 13053
 Cruess, W. V. 2722
 10037, 10038
 Cruickshank, J. C. 17127
 Cruickshank, R. 17366
 Cruickshank, J. W. 15632
 Crum, E. 16136
 Crum, G. E. 4233
 Cruz, M. A. da S. 3355
 Crzelliizer, R. 11037
 Csech, A. G. 3958, 5664
 Csech, A. G. 5416
 Csik, L. 16194
 Csinday, E. 16708
 Cuckler, A. G. 8735, 10518
 Cuénod, A. 2611
 Cuénod, E. 15778
 Cuénod, L. 3438
 Cugnac, A. de. 67
 Culbertson, J. T. 4544
 5097, 6135, 9338
 9908, 9909, 17240
 Cullen, G. E. 17364
 Culler, E. A. 4007, 12643
 Culmer, C. U. 12643, 14613
 Culpepper, C. W. 1178
 2930, 14002
 Cultrera, R. 1396
 Cumings, G. A. 10185
 Cumings, J. N. 14741
 Cumley, R. W. 1620
 6893, 7990
 14367, 18003
 Cummings, D. E. 3276
 Cummings, M. B. 4868
 Cummings, G. B. 14036
 Cummings, H. 4371, 8014
 Cunningham, A. 17398
 Cunningham, B. 656
 9284, 12823, 15074
 Cunningham, G. 4176
 Cunningham, H. S. 10372
 Cunningham, O. 14611
 Cunningham, R. W. 16763
 Cunny, L. 5568
 Capps, P. T. 14648
 Carbelo, A. 10936
 Carl, L. F. 5022
 Curran, C. H. 6894
 6895, 6896, 6897
 Curran, H. R. 2754
 Curry, E. 11425
 Curry, J. M. 8299
 Curry, J. R. 15649
 Curtillet, E. 15009
 Curtis, A. C. 15266
 Curtis, G. M. 4288, 16336
 Curtis, H. J. 1391
 11136, 12643
 Curtis, J. T. 10779
 Curtis, M. J. 10039
 Curtis, O. F. 4937, 4946
 Curtiss, A. 1676
 Curwen, A. O. 15012
 Cushing, E. C. 5058, 5061
 Cushman, J. E. Jr. 18105
 Cushman, J. A. 14199
 Cushman, M. 1960
 Cushman, R. A. 18025
 Cusin, 13928
 Custodis, A. 15941
 Cuthbertson, A. 7086
 Cuthbertson, D. P. 2020, 7429, 9159
 Cutler, G. H. 6495, 17601
 Cutler, H. H. 5854
 Cutting, C. L. 10040
 Cutting, R. A. 3943
 5741, 9144, 13093
 Cutting, W. C. 2322, 2323, 4271
 13178, 14614, 14615
 Cuttle, T. D. 7876, 12643
 Cuyler, W. K. 14637
 14968, 16609
 Cwalina, G. 10289
 Czarneci, E. 12744
 Czimmer, A. G. 4124, 4154
 Czymoch, O. 6228
 D
 Daan, A. 7948
 Daan-Stiemens, M. J. 7948
 Dabelstein, H. 8225
 Dabral, B. M. 2931
 Dachnowski-Stokes, A. P. 7242
 Duck, G. M. 2544, 6140, 7399
 9960, 11634, 13409
 Duck, S. 11189
 Dadant, M. G. 14150
 Daddi, G. 6184, 11594
 Daels, J. 5742
 Daft, F. S. 16512
 D'Aguiar, J. 8324
 Dahl, K. 3529
 Dahle, C. D. 776
 6007, 17412
 Dahms, R. G. 5066, 8930
 Dahr, P. 933, 934, 4535
 9725, 10741, 13521
 Daily, W. A. 1851
 Daines, R. H. 3169
 Daiser, K. W. 7582
 Daker, W. D. 1053, 6302
 Dakin, H. D. 3746
 Dakin, W. J. 10
 Daleq, A. 8033
 Dale, E. E. 8931
 D'Alessandro, G. 810, 2527
 Dallas, J. W. 2924, 13799
 Dallavalle, J. M. 10010, 10018, 14986
 Daldorf, G. 2612
 13591, 17284
 Dallenbach, K. M. 3425
 Dalling, T. 11729
 Dalmasso, G. 1235
 Dalquest, W. W. 7038
 Dalsace, J. 13041
 Dalsgaard-Nielsen, E. 9473
 Dalton, H. R. 6613
 Dalton, J. W. 4092
 Daly, I. de B. 3775
 Daly, J. 909
 Dam, H. 1961, 9244
 11027, 16546, 16917
 Damboviceanu, A. 11791, 13469
 D'Ambrosio, L. 7488, 16427
 Dameshek, W. 633, 14927
 Dammers, C. M. 5141
 Damodaran, M. 5452, 5453
 Damon, E. B. 15723
 D'Amour, F. E. 7539, 9888
 D'Amour, M. C. 7539
 Damsté, P. H. 11111
 Dan, J. C. 4397
 Dan, K. 17555
 Dana, B. F. 17555
 Danbolt, N. 968
 Danby, M. 3809, 9382
 Dandurand, W. R. 3625
 Dandy, J. E. 2833
 6398, 6432
 Dandy, W. E. 3810
 Danehy, J. P. 2421
 Danforth, C. H. 8947, 16601
 Danforth, D. N. 7582, 12643
 Dangeard, L. 13719
 Dangeard, P. 2788
 Dangeard, P. A. 8715
 D'Angelo, S. A. 5896
 Dangerfield, W. G. 8175
 Daniel, B. 11903
 Daniel, J. 1763
 Daniel, J. F. 7114
 Daniel, R. S. 7613
 Danielli, J. F. 13072
 Danielopolu, 4107
 Danielopolu, D. 12945
 Daniels, A. L. 14558
 Daniels, F. D. 5499
 Daniels, J. 3421
 Daniels, L. B. 6697
 Danielson, I. S. 14481
 Danielson, R. N. 430
 Danilov, A. N. 17
 Dann, W. J. 12643, 16513
 Dannecker, K. 3018
 Dant, G. 2140
 Dantchakoff, V. 14616
 D'Antona, D. 2755
 D'Antoni, J. S. 3239
 Dantschakoff, V. 9769
 Dantschakoff, W. 4386
 Dänzer, H. 12702
 Darbellay, J. 15633
 Darby, W. J. 9225, 12774
 Darkis, F. R. 6682, 8630
 Darling, F. F. 8414, 3585
 Darlington, C. D. 7124
 Darlington, P. F. Jr. 1524, 5374
 Darrow, C. W. 7088
 7654, 12643
 13153, 14715
 Darrow, D. C. 7565
 Darrow, G. M. 4869, 15592
 Darrow, M. A. 1047
 Darsie, M. L. Jr. 8095
 Dart, R. A. 9726
 Das, B. C. 837
 Das, K. 13836, 16267
 Das, S. K. 5880
 Dadsdy, O. C. 16991
 Das Gupta, B. M. 15185, 17128
 Das Gupta, C. R. 11213
 Das Gupta, M. 6762, 6770
 Dash, H. H. 7427
 Dassanayake, W. L. P. 12249
 Dastur, N. N. 306
 Dastur, P. S. 4372
 Dastur, R. H. 1351
 8591, 17798, 17799
 Datta Roy, B. K. 2629
 Dauban, Mlle. 13131
 Daubard, 14851, 14852
 Daubenmire, R. F. 5366, 10122
 Dauer, C. C. 980
 8286, 11682
 Daugherty, K. 1902
 7543, 7252
 Daugherty, L. H. 2784
 Daum, K. 3732
 Daumexon, G. 7650
 D'Aunoy, R. 8247
 9602, 11280, 16894
 Dauphinee, J. A. 8176
 Daur, T. 13234
 Dautrebande, L. 13146, 16764
 Davenport, C. B. 559
 Davenport, H. 4373, 7244
 4809, 5258
 Davenport, L. F. 2293
 Davey, D. G. 10479
 Davey, V. McM. 15482
 David, E. 4306
 David, F. N. 16214
 David, K. 3811
 David, L. R. 5151, 18042
 David, L. T. 1764
 David, P. A. 17572

- David, R., 1324
12105, 14844, 14845
David-Beaulieu, A., 16064
Davidoff, L. M., 12694
Davidsohn, I., 7877, 9986
Davidson, C. E., 9638
Davidson, J. A., 6024
Davidson, J. N., 12880
Davidson, M., 14987
Davidson, O. W., 2986
Davidson, R. H., 10604
Davidson, R. W., 3169
15439, 15890
Davies, A. A., 16425
Davies, L. J., 11857
Davies, P. A., 6444
Davies, R. O., 17573
Davies, S., 16294
Davies, W., 118
6462, 9216
Davies, W. L., 13869
13370, 13664, 14570
Davis, A. C., 5043
Davis, A. P., 17367
Davis, C., 3481
6942, 14278
Davis, C. C., 13371
Davis, C. D., 14679
Davis, C. L., 11310, 12643
Davis, D. H. S., 12575
Davis, F. L., 11963
Davis, F. R., 7975
Davis, G. E., 4584
4599, 15296
Davis, G. W., 5219
Davis, H., 5690, 7088
7244, 12643, 16690
Davis, H. A., 7339
7562, 9145, 12643
Davis, H. P., 2168
8091, 9315
Davis, H. S., 14407
Davis, J. E., 577
9542, 12643, 14802
Davis, J. F., 11949
Davis, J. G., 17450
Davis, J. J., 10382
Davis, L. J., 17294
Davis, P. A., 5690
12643, 16690, 16691
Davis, R. C., 9437
Davis, R. N., 8076, 13679
Davis, W. B., 3492, 5219, 5220
5221, 10659, 12445
Davis, W. C., 3169, 15890
Davison, C., 11171
Davison, D. B., 6804
Davison, E., 9960, 13409
Davison, H. G., 10996
Davison, R., 4085
Davison, R. A., 16386
Davson, H., 10837, 14500
Dawidenkow, S., 10742
Dawis, V. M., 1236
Dawson, A. B., 9771
Dawson, C. D. R., 16215
Dawson, J. C., 1485
Dawson, J. R., 773
Dawson, M. H., 7366
9604, 14913
Dawson, P. R., 17787
Dawson, R. F., 4823
9290, 17721
Dawson, W. M., 9205, 16224
Dawson, W. T., 13178
Day, C. D. M., 16544
Day, D., 12117
Day, H. G., 2032, 4186
7403, 9169, 16445
Day, M. F., 3481
Day, P. L., 311
9225, 12774
Day, R., 11263
Day, R. K., 13964
Day, W. R., 15798
Dayman, A. L., 7368
Dayton, W. A., 2854
De, M. N., 17055
De, N. K., 314
815, 5552
De, P., 5484
5501, 5502
De, P. K., 10072, 11785
De, R. N., 10237, 12001
De, S. P., 811
De, S. S., 6050
De, U. N., 5852
Deakins, M., 9543
Deakins, M. L., 5904
Deamer, W. C., 6038, 9839
Dean, A. S., 6039
Dean, G. A., 14, 14327
Dean, H. T., 8287
13277, 15297
Dean, L. A., 13875, 16234
Dean, R. B., 16295
Deanessly, R., 9291
Dearborn, N., 18091
Dearborn, W. E., 721, 3600
Dearing, W. P., 8127
Dearness, J., 10109
Deason, H. J., 10620, 14423
DeBailey, M., 13106, 16741
DeBeer, E. J., 4103
4109, 4121
9550, 11214
De Beer, G. R., 4304
Debenham, E. M., 13732
De Bodo, R. C., 12643
De Boer, S., 5743
De Boer, W. J., 11971
Debono, J. E., 6136
Debraux, M. G., 8565
Debray, O., 13103
DeCamp, P. T., 13407
De Capito, T. M., 8294
DeCacio, T., 10901
Dechaseaux, C., 16108
Decherd, G. M. Jr., 13117
Decker, A. de., 1415
Decker, C. E., 3272
Decker, G. C., 1493
Decker, P., 6670
Decker, R. E., 11940
Deckner, K., 4187
Decoux, L., 6463, 6464, 6465
6466, 6648, 17574
Deederer, C., 16504
DeEds, F., 2294
2334, 7756, 11596
Deen, O. T., 5070
Deere, C. J., 10080, 13680
Deevey, E. S., Jr., 16255
Deffner, M., 13671, 13676
DeFrance, J. A., 13982, 13983
DeGara, P. F., 13403
De Garis, C. F., 8012, 9677
Degelius, G., 6363
Degerböl, M., 1828
Degering, E. F., 4656
DeGiusti, D. L., 10549
Degman, E. S., 3146
DeGowin, E. L., 3626
DeGraft, A. C., 516
DeGroat, A. F., 4087, 16724
De Haas, J. H., 10950
Dehay, C., 4807, 8433
Dehmel, H., 2528, 4542
Dehmann, E., 3294
Deichmann-Gruebner, W., 5869, 11361
Deignan, H. G., 5173
8827, 10638, 18061
Deines, G., 10238
Deinse, F. v., 2746, 13600
Dei Poli, G., 13410
Deist, H., 1962
De Jong, H., 14803
Dekkers, H. J. N., 10897
Delafosse, W., 8828
DeLamater, A. J., 12280
DeLamater, E. D., 6203
DeLangen, C. D., 3692
DeLanney, L. E., 11374
DeLaporte, A. V., 11776
DeLaune, E., 12745
Delay, J., 11355
Delbrick, M., 9946
Delevoey, G., 12002
Delisle, A. L., 6428, 11991
Della Giovanna, G., 16765
Della Monica, F., 11524
Delmé, E., 16065
Del Monte, R., 1934
DeLong, D. M., 1629
8346, 8435
10472, 10604
DeLong, W. A., 8481
Delpy, G., 16008
Delphaut, J., 5775
7558, 13168, 14835
Delphy, J., 6763
Delpy, J., 10011
Delrué, G., 9252
Delwiche, E. J., 15535
De Magalhães, O., 11215
Demandt, C., 5167, 16066
Demaree, J. B., 2795
Dembowska, W. S., 3259
Dembowski, J., 10519
De Meillon, B., 7086, 14279
Demerec, M., 87
7138, 14343
Demeter, K. J., 6275
Demetrescu, I. C., 10239
Demetriades, S., 8619
Deming, D., 11683
Deming, W. E., 9205
Demole, M., 12853, 12856
7492
11281, 12866
Dempsey, E. W., 459
2223, 7604
9415, 13034
De Muro, P., 10489
De Navasquez, S., 16895
Dence, W. A., 3378
Dengler, A., 3573
Dénier, A., 14468
Denis, J., 17985
Denis, J. R., 3368
Denisov, N. J., 13
Denker, A., 3457
Dennhardt, L., 13968
Dennis, C., 11138, 12643
Dennis, E. W., 51535
Dennis, H., 14314
Dennis, J., 290
Dennis, J. A., 8493
Dennis, R. W. G., 6649, 6650
Denny, F. E., 6614, 17693
Denoga, N., 17647
Denolin, H., 14501
Denstedt, O. F., 12643
Denton, J. F., 17930
Deonier, C. C., 5072
Deotto, R., 13147
De Peralta, F., 17800
Deppe, B., 13107
Deppe, M., 12865
D'Erasmus, G., 8238
Derbyshire, A. J., 12643
D'Ercole, A. D., 2504
Derevici, A., 13148, 13149
Derevici, M., 13148, 13149
DeRivas, D., 3240
Dermen, H., 1742
Dermer, L., 14573, 14591
De Ropp, R. S., 6565
Derouaux, G., 14804
Derrick, E. H., 8195
8196, 8210
Derrien, Y., 12746
12764, 12765
De Saram, G. S. W., 14908
Descazeaux, J., 14172
Desch, H. E., 4883, 15634
Desclin, L., 14639
Deshapande, S. S., 12047
Deshpande, G. S., 4768
Deshpande, R. B., 16167
De Silva, P. C. C., 16209
Des Jayasundera, E. S., 13876
DeSmidt, F. P., 8107
De Sola, R., 8875
De Soya, D. J., 14151
Desportes, C., 12248
Desrut, G., 9727
Dessel, F. W., 12659
Deters, M. E., 1286
Dethier, V. G., 10766
13054, 16041
Detrick, L. E., 13178
Detwiler, S. R., 744
745, 11433, 13324
Deuber, C. G., 10219
Deucher, W. G., 7679
Deulofey, V., 3944
Deuquet, C., 6872
Deuticke, H. J., 14742
16709, 16710
Deutsch, J. V., 6303
Devaux, H., 4957
Dévé, F., 1550
De Veer, J. A., 16839
Devereux, E. D., 17408
Devirian, P. S., 17706, 17707
Devitt, O. E., 18059
DeVries, A., 3627, 11655
De Vries, L., 14335
De Waal, H. L., 6541
Dewald, D., 485, 486
Dewan, J. G., 10852
Dewar, M. M., 2044
Dewez, W. J., 15818
DeWitt, J. B., 340
Dewulf, A., 654, 1542
Dexter, S. T., 4830, 8460
Deysach, L. J., 4312
Dhawan, C. L., 11969
Dhayagude, R. G., 5829
Diachun, S., 6687
15791, 17807
Diamond, M., 4306
Dias, E., 14173
Dias, M. V., 11140
14732, 14840
Diaz, J. T., 7320, 7708
Dibb, M. J., 1577
Dibbelt, L., 812
Dice, L. R., 5867
8860, 8861, 8862
Dick, G. F., 10012
Dick, G. H., 10012
Dick, J. B., 1481
Dick, M., 12910, 14593
Dicke, F. F., 17368
Dickens, S. N., 4824
7340
Dickens, F., 10817
Dickerson, L. M., 10817
Dickerson, V. C., 7741
Dickerson, E. W., 12484
Dickes, R. D., 15319
Dickey, S. S., 6996
Dickie, A., 8874
Dickie, L. F. N., 5863
Dickinson, E. M., 11751
Dickson, E. C., 4639, 6204
Dickson, G. H., 1237, 15593
Dickson, H., 5313, 6594
Dickson, R. C., 8176
Diebold, C. H., 1223
Diebschlag, E., 7614
Diehl, W. W., 13732, 15446
2827A, 4780
Diels, L., 10129, 11882
11883, 13755
Diemair, W., 8556
Dienes, L., 2756
13693, 14921, 15412
Dienst, C., 7430
Dieryck, J., 14786
Dieseecke, L., 2049
Dieselhorst, G., 16101
Dieter, R., 6229
Dieterle, H., 10290
Dieterich, D., 4188
Dieterich, H. F., 4557
Dieterich, J. E., 4157
Diettert, R. A., 3435, 4803
Dietz, A. K., 16403
Dietz, H. F., 12234
Dietzel, E., 15689
Dieuzeide, R., 15381
Digilio, V. A., 5744
Digonnet, L., 13538
Dijkstra, B., 12920
Dijkstra, N. D., 4412
Dikmans, G., 17951, 17952
Dikshit, B. B., 404, 3590
Dill, D. B., 7244
10890, 11076
Dill, L. V., 414
Dille, J. M., 540, 2295
Diller, O. D., 13964
Dillon, B. M., 14920
Dillon, J. B., 12643
Dillon, J. R. Jr., 11245
Dillon, T., 3044
Dimick, M. K., 3721
Dimitri, V., 2408
5805, 7906
Dimitrijević, D. T., 2454
Dimitry, T. J., 7641
Dimock, A. W., 17831
Dimock, W. W., 13662
Dingemans, E., 9305, 9333, 9416
12946, 12994, 13198
Dingle, J. H., 4604
10078, 17129
Dingwall, M., 11048
Dionigi, A., 4962
Di Palma, J. R., 4078
Dirken, M. N. J., 12920
Dirschel, W., 12947
Ditlevsen, H., 1606
Ditman, L. P., 17369
Dittmar, C., 4189
Dittmer, H. J., 9012
Dix, I. W., 13895
Dix, W. L., 11848
Dixon, A., 14200
Dixon, H. H., 4938
Dixon, H. M., 5819
Dixon, H. N., 1093, 11336
Dixon, J. S., 7038
Dixon, M., 14440
Dixon, S. F., 9134
Djourichitch, M., 8120
Djourno, A., 180
Dmochowski, L., 813
814, 5806, 6040,
6041, 6042, 6043
Doak, G. O., 13178
Doak, K. D., 3169
Doan, C. A., 10943
Doan, K. H., 18043
Dobberstein, J., 2693, 8318
Dobbs, C. G., 8389, 16256
Dobell, C., 16126
Dobriner, K., 18347
Dobrinescu, C., 8067
Dobrounol, L. G., 17673
Dobrovolskii, N. F., 9110
Doby, T., 16918
Dobzhansky, T., 1743
3982, 5335
8948, 10735
Docters van Leeuwen, W. M., 8808
Dodd, D. R., 2932
Dodd, E. C., 3812
9291, 12491, 16596
Dodds, H. H., 1184, 18805
Dodds, K. S., 14350
Döderlein, W., 437
Doderio, J., 8288
Dodge, C. W., 6364
Dodge, E. F., 2153
Dodge, F. N., 15609
Dodge, H. R., 16028
Dodge, R. E., 11734
Dodonova, E. V., 9114, 13806
Dodson, D. B., 15573
Doebbeling, S. E., 8592
Doehrl, C. A., 6692
Doehmer, K., 12033, 12034
Doeksen, J., 3181
Doenges, J. L., 9962
Doerr, R., 13411
Dognon, A., 12715
13063, 16388, 16389
Dohan, F. C., 378
5616, 12643
Dohan, J. S., 12708
Dohanian, S. M., 8669
Doidge, E. M., 3629
Doisy, E. A., 3927
3928, 7315, 9245
12870, 12871, 16549
Doladili, M., 10898
13412, 13413
Dolan, M. E., 4301
Dolger, H., 2029, 14954
d'Oliveira, B., 6628
14333, 15457
d'Oliveira, M. de L., 14333
Doljanski, L., 15075
Dolkart, R. E., 9623
Dollfus, R. P., 3285, 3286
Dolman, C. E., 11661
11654, 11685
Domagk, G., 7830
Domanski, T. J., 7295
Dombronesky, H., 626
Domenjoz, R., 14805
Domes, N., 1287
Domin, K., 10157
Dominguez, K., 7619
Domini, G., 10968, 10969
Domnick, C. B., 17870
Domke, W., 15500
Domokos, J., 10706

Donabedian-Ellett

Donabedian, A. S. 13178
 Donahue, J. K. 3813
 Donald, A. B. 4611
 Donald, H. P. 5979
 7757, 13190
 15100, 17071
 Donaldson, F. T. 4911
 Donaldson, G. A. 9289
 Donaldson, R. W. 17570
 Donatelli, L. 2296
 5745, 16766
 16767, 16768
 Donath, W. F. 316, 10950
 Dongen, K. v. 5746
 5747, 9518
 Doniger, C. E. 7709
 Donnellon, J. A. 247
 Donnelly, G. L. 7569
 Donnelly, Sister
 M. W. 1370
 Donnet, V. 13023
 13104, 13126, 14730
 Donon, F. 10240
 Donovan, P. B. 3750, 12643
 Dostas, S. 13073
 Dotcheff, L. 14476
 14477, 14478
 Doolittle, S. P. 15858
 Doorenbos, S. G. A. 4988
 Dopter, P. 4858
 Dore, W. H. 6499, 17617
 17480
 Dorf, E. 17480
 Dorfman, R. I. 3814
 6044, 14628
 15136, 16602
 Dorier, A. 12366, 15060
 Dorin, E. 11791
 Dormanns, E. 13199
 Dorn, H. F. 2409
 Dornier, H. B. 10233
 Dornfeld, E. J. 17003
 Dorr, E. M. 9643
 Dorriss, F. 5954, 9770
 Dorsey, M. J. 5314
 Dos Passos, C. F. 6933
 Doster-Virtue, M. E. 5539, 10976
 Dotterweich, H. 8736
 Doty, J. R. 10972, 10973
 Doubilet, H. 470
 Doubly, J. 13641
 Doucette, C. F. 12184
 Doudoroff, P. 3983
 Dougherty, R. W. 5881
 Dougherty, T. 17218
 Douglas, B. 698
 Douglas, B. H. 15298
 Douglas, C. G. 14534
 Douglas, W. A. 12185
 Douglas, W. B. 3434
 Douglass, J. R. 12186
 Douglass, M. 2612
 Doull, J. A. 4653
 Doune, A. L. 3563
 Doupe, J. 9135
 9514, 9515
 Douthwaite, M. 8291
 Doval, J. M. 14192
 Dove, W. E. 5063, 12218
 Dove, W. F. 8922
 D'Ovidio, F. R. 7941
 Dow, P. 4060
 4070, 11098, 12643
 Dow, R. S. 12643
 14711, 16692
 Dowden, P. B. 10447
 Dowling, H. F. 17328
 Down, E. E. 13807
 Downie, A. W. 9945, 15219
 Downing, S. C. 5230
 Downing, V. 254
 Downman, C. B. B. 16972
 Downs, A. A. 13929
 Downs, R. N. 13276
 Dawson, W. J. 15413
 Daxator, C. W. 13815
 Dayer, L. O. 12163
 Doyle, J. 11915
 11921, 12118
 Doyle, L. P. 4408
 Dozier, H. L. 6701
 12187, 14115
 Dozois, K. P. 2757
 Dozzi, D. L. 13108
 Drabkin, D. L. 10899, 16387
 Dragstedt, C. A. 13178

Dragstedt, L. R. 3750
 7899, 12643
 Drain, B. D. 12522
 Drain, C. L. 5904, 15038
 Drake, C. J. 1493, 12377
 Drake, M. E. 12116, 13150
 Drake, T. G. 14957
 Drake, T. G. H. 2038, 2402
 Draper, R. 416
 Draper, W. B. 13178
 Draper, W. F. Jr. 13455
 Drastich, L. 9146
 Drawert, H. 4922
 4951, 13973, 13993
 Drea, W. F. 263, 2750
 Drechsler, C. 6341, 10342
 Drees, E. M. 4884
 Dreesen, W. C. 1371
 Dreker, L. 3564
 Dreosti, A. O. 8174
 Dresbach, M. 12643
 Dresden, D. 5850
 Dressel, E. G. 6045
 Dresser, R. 16320
 Drew, C. R. 10934
 Drew, G. C. 9438
 Drew, K. M. 13722
 Drew, W. B. 1836, 15476
 Drewes, K. 6276
 Drews, M. 1217
 Dreyer, T. F. 5924
 Dreyfus, A. 1718
 Driggers, B. F. 12175
 Drill, V. A. 2060, 3722
 Drimbom, H. J. 1334
 Drinker, C. K. 364
 678, 7937
 11358, 13589
 Drips, D. G. 5617
 Driver, R. L. 12643
 Drobnik, R. 17667
 Droller, H. 4293, 4558
 Drouet, F. 1064, 13723
 Druckrey, H. 574, 4190
 7748, 9292, 11282
 Druetti, G. C. 16874
 Drummond, A. C. 17258
 Drummond, D. H. 11283, 11304
 Drummond, F. E. 1719
 Drummond, J. C. 1028
 Drummond, 2723, 9242
 Drury, D. R. 297
 2026, 12643
 12815, 16436
 Druzba, J. F. 3466
 Dry, F. W. 1765, 17072
 Dry, T. 5714
 Dry, T. J. 14757
 Dryden, L. P. 12643, 12958
 Dryski, A. 4012
 Dscheng-Hsing, D. 2617
 D'Silva, M. 5753
 Duarte, A. J. 14333
 Dublin, L. H. 7899
 Dubner, H. 5691
 Dubois, A. 4654, 15414
 Dubois, D. 9760
 DuBois, E. F. 280
 2015, 14523
 Dubois, J. 4761
 Dubos, R. J. 6160
 13694, 13695, 17451
 Duboscq, O. 8776
 Duboux, M. 12664
 Duboussin, M. 4040
 Du Buy, H. G. 1356
 Duca, C. J. 4545
 Dücke, A. 2356
 Dudits, A. 10900
 Dudley, B. L. 722
 Dudley, L. H. 16320
 Duensing, F. 517
 Duerden, J. E. 13286
 Duff, D. A. 8132
 Duff, D. C. B. 13696
 Duff, G. L. 11172, 14879
 Duffett, N. D. 1054
 Duff, C. E. 17829
 Duff, J. 13860
 Dufrénoy, J. 1436, 8122
 Dugal, L. P. 10981
 Duggan-Cronin, A. M. 9728
 Duggar, B. M. 3067, 3169
 Duggli, M. 15685
 DuJarric de la Riviere, R. 11835, 16479
 Dyer, R. A. 18756

AUTHOR INDEX

Dulaney, A. D. 10080
 Duley, F. L. 17575
 Dumaresq, J. A. 4672
 Dumazert, C. 12747
 Dumke, P. 5656
 Dunbar, F. 7088
 Dunbar, J. 11029
 Duncan, C. D. 10684
 Duncan, C. W. 248
 Duncan, D. 2436
 Duncan, G. G. 12643, 14536
 Duncan, H. 12311
 Duncan, M. T. 16543
 Dundas, B. 17812
 17813, 17814
 Dunegan, J. C. 3107
 Dunford, R. E. 7323
 Dungal, N. 17386
 Dungan, G. H. 15536
 Dunham, G. C. 13482
 Dunham, H. H. 431
 Dunker, C. F. 14565
 Dunker, M. F. W. 14806
 Dunkle, D. H. 10621
 Dunkle, E. C. 13852
 Dunlap, A. A. 6508, 15889
 Dunlap, G. L. 957, 11736
 Dunlap, J. W. 7168
 Dunmore, F. W. 3432
 Dunn, L. C. 1766
 3455, 12548
 Dunn, L. E. 15726
 Dunn, M. 15183
 Dunn, M. S. 1917, 14484
 Dunnam, E. W. 5023
 Dunnewald, T. J. 10211, 15576
 Dunning, J. M. 8251
 Dunning, R. G. 4868
 Duntley, S. Q. 15080
 Dupond, C. 6997, 6998
 6999, 8229, 8330
 8331, 16068, 16069
 Dupont, F. M. 17399
 Durand, J. F. 12503
 Durand, P. 11583
 11584, 15187, 15220
 Duran-Reynals, F. 2529
 10838, 11284
 Durant, C. L. 15636
 Durant, T. M. 11173
 Durgin, R. C. 8094, 8095
 Durham, N. C. 13109
 Durham, O. C. 6046
 Durieux, C. 8142
 Dürken, B. S. 13325
 Durmishidze, S. V. 1890
 Durrant, S. D. 5219
 Durrell, L. W. 12157
 Dusi, H. 1582
 Dusser de Barenne, J. G. 4013
 9434, 12643, 14716
 Duxan, G. G. 10408, 10420
 Dustin, C. C. 16871
 Dustman, R. B. 2482, 9708
 Dutcher, R. A. 9811A
 10998, 11494, 17089
 Dutmer, C. J. 10244
 Duthie, D. W. 8601
 Duthie, E. S. 16962
 Dutilly, A. 17609
 Du Toit, A. L. 13853
 Dutro, R. 119
 Dutt, A. T. 1321
 Dutt, S. 12026
 Dutt, H. K. 17055
 Dutton, L. O. 6047
 Du Vigneaud, V. 12803, 16479
 Duyff, J. W. 4366
 Duyvené de Wit, J. J. 9293, 13080
 Dwan, P. F. 11553
 Dwyer, Sister C. M. 1060, 1359, 3062
 Dwyer, J. M. 7815
 Dwyer, R. E. P. 4870, 8494
 Dybing, O. 518
 5760, 16780
 Dyckerhoff, H. 5454, 12716
 Dye, J. A. 12643
 Dyer, E. L. 7000
 Dyer, H. M. 9189
 11085, 16479
 Dyer, R. A. 18756

Dyer, R. E. 4585, 17285
 Dyer, W. W. 519, 16722
 Dyk, V. 10622
 Dyke, C. G. 12694
 Dykstra, T. P. 3123
 3169, 14095
 Dyne, M. B. 8813
 Dynes, J. B. 9639
 Dyniewicz, J. M. 551
 Dyrenforth, L. Y. 565
 Dyson, C. B. 815
 Dyson, G. M. 16795
 Dziemian, A. J. 14443
 Dzionara, K. 2297
 Eadie, W. R. 4344, 12446
 Eagle, H. 816
 817, 11525, 11566
 13178, 17244, 17245
 Eagles, G. H. 17130
 Eagleson, C. 5073
 Eakin, R. M. 8016, 15076
 Eales, N. B. 3273
 Eamiguel, P. G. 17073
 Earlam, W. T. 9398
 Earle, I. P. 2485
 Earle, K. V. 6542, 17246
 Earle, T. T. 4809
 Earle, W. R. 1667
 5807, 5955
 East, B. R. 15299
 East, T. 7710
 Eastcott, E. V. 16366
 Eastham, L. 16023
 Eastham, L. E. S. 16046
 Eastlick, H. L. 17047
 Eastman, N. J. 419, 16658
 Eastwood, A. 4781
 4782, 6384, 6399
 6400, 6401, 6402
 6403, 10130, 11854
 Eaton, A. G. 10972, 10973
 Eaton, J. C. 7898
 Eaton, M. D. 2530
 6128, 8170
 13532, 13533
 Eaton, O. N. 9678, 16195
 Eaton, T. H. Jr. 8808
 Ebbecke, U. 16404
 Ebeling, A. H. 740, 5953
 Ebeling, W. 3347
 Eberhard, H. M. 12717
 Ebert, R. H. 3601
 Ebinger, D. G. 1037
 Ebster, H. 5748
 Eby, F. H. 6543
 Eccles, J. C. 7244
 Echevin, R. 8587
 Eck, J. C. 9238, 9239
 Eck, W. F. v. 3815
 9294, 12948
 Eckardt, R. E. 7642
 Eckel, O. 140
 Ecker, A. D. 688
 Ecker, E. E. 891, 927
 2531, 4346
 6048, 17227
 Eckerhom, S. 8527
 Eckert, J. F. 14549
 Eckhardt, P. 4061
 Eckman, M. 11043
 Eckstein, H. C. 3700, 14541
 Eckstein, K. 10429
 Eckstein, O. 15743, 15836
 Eckstein, R. W. 12643
 Eddie, B. 13458, 15819
 Eddins, A. H. 15868
 Eddy, C. W. 2294, 2334
 Eddy, N. B. 7758
 7759, 11218
 Eddy, S. 16954A
 Eddy, W. H. 16505
 Edelmann, A. 12952
 Eder, H. 10853
 Eder, L. F. 16927
 Edgar, C. E. 7461, 7478
 Edgar, S. A. 6127
 Edgecombe, A. E. 12114
 Edgerton, C. W. 8169
 Edgerton, D. P. 3001
 Edgington, G. 13847
 Edhem, 3628

Edhem, E. F. 9578
 Edinger, T. 13287
 Edlin, A. 10994, 14558
 Edlund, C. M. 2614
 Edmond, J. B. 13877
 Edmondson, C. H. 10793
 Edmondson, W. T. 6805
 Edmondson, W. C. 2933
 Edney, L. E. 8617
 Edström, G. 7507
 Edward, D. C. 2613
 Edwards, A. S. 12737
 Edwards, E. A. 15030
 Edwards, E. 1460
 Edwards, F. W. 12494
 Edwards, J. C. 480, 9538
 Edwards, LeR. D. 16769
 Edwards, L. F. 9707, 13306
 Edwards, M. V. 9013
 Edwards, P. R. 4444, 10077, 11792
 13662, 13697, 17293
 Edwards, W. D. 15895
 Edwards, W. H. 1461
 Efkemann, G. 2156
 2159, 3884
 Efimenko, O. 9115
 Efron, B. G. 6044, 15186
 Eger, W. 5540
 Eggers, E. R. 1244
 15597, 15598
 Eggers, V. 3061, 3169
 Eggerth, A. H. 6303, 6304
 Eggleton, F. E. 12609
 Eggleton, W. G. E. 7978
 11338, 13686
 Eggle, K. 12086
 12102, 12911
 Egler, F. E. 13757
 Ecoville, J. W. 2354
 Ehrenfeld, L. 14571
 Ehrhardt, I. 756
 Ehrlich, 6230
 Ehrlich, J. 12164, 17846
 Ehrstrom, M. C. 2141
 Ehrstrom, R. 210
 Eichelberger, L. 7341, 12643
 Eichhorn, A. 9904
 Eichhorn, E. A. 15221
 Eichler, O. 4110
 Eichler, P. 9585
 Eichler, W. 5703
 6850, 8797, 14336
 Eickhoff, H. 4445
 Eickhoff, W. 818
 Eigsti, O. J. 1698
 Eijk, M. v. 6602
 Eiman, J. 17295
 Einhorn, N. H. 389, 9295
 Einsele, W. 1766
 Eirich, F. 16405
 Eirich, C. W. 14502
 Eisen, D. 3776
 Eisenberg, H. 3921
 7901, 16034
 Eisenhart, C. 12520
 Eisler, B. 4191
 Eisler, H. P. 13930
 Eisler, M. v. 819, 820
 Ejercito, A. 14174
 Ejercito, J. M. 17884
 Eklund, C. M. 618
 Ekman, G. 746
 Elberg, S. S. 11793, 13698
 Eldahl, A. 3581, 5653
 Eldering, G. 9861
 Elderton, W. P. 7169
 Eldredge, I. F. 3037, 15632
 Elford, W. J. 15246
 Elftman, H. 4041
 4042, 12643
 Elfvig, E. 10081
 Elhardt, E. 12748
 Elias, H. 8034
 Eliason, E. J. 12120
 Eliescu, G. 3196
 5173, 15910
 Eliot, M. M. 11271
 Eliot, W. A. 3019
 Elkan, E. R. 3964
 Elkes, J. J. 7342
 Elkins, H. B. 11859
 Ellenberg, M. 9187
 Ellenwood, C. W. 3147
 Ellett, E. C. 7831

- Elliker, P. R., 1037, 8340
 Ellinger, F., 12684, 14467
 Ellinger, G. F., 11016
 Ellinger, R., 12782
 Elliott, A. H., 4062
 Elliott, W., 8289
 Elliott, A. J., 5174
 Elliott, A. M., 6764
 Elliott, C., 6639, 15839
 Elliott, D. C., 6909, 6914
 Elliott, F. H., 5529
 Elliott, K. A. C., 5529, 10982
 Elliott, R. M., 7626
 Ellis, A. G., 760
 Ellis, C. C., 6725
 Ellis, D. E., 12119
 Ellis, D. M., 15005, 16822
 Ellis, E. L., 9946
 Ellis, F., 13178
 Ellis, F. A., 4559
 Ellis, G. H., 14555
 Ellis, L. B., 11174
 Ellis, N. K., 1238
 Ellis, N. R., 8078
 Ellis, R. V., 17131
 Ellison, E. T., 3884
 Ellison, L. O., 5024
 Ellsworth, L. D., 17456
 Elman, R., 2330, 10974
 Elmy, A., 2071, 7307
 Elmer, A. W., 7479
 El-Nayal, A. A., 2789
 Ellof, G., 5336
 El Ridi, M. S., 12607
 El Sadr, M. M., 7461
 7478, 11007, 11008
 Elsäusser, F., 697
 Elsborg, C. A., 12694, 16693
 Elsnor, H., 4111
 Elsom, K. A., 9544
 Elson, P. F., 10806
 Elster, H. J., 12623
 Elton, C., 5222
 Elton, N. W., 2093
 Elvehjem, C. A., 2691, 3567, 3704
 3727, 3730, 7454
 7463, 7468, 7481
 10911, 11012, 12837
 12838, 16522, 16529
 Elvove, E., 15208, 15297
 Elwin, M. G., 12420
 Elwood, B. J., 10901
 Ely, F., 8949
 Ely, Z., 5827
 Emanuel, A., 4192
 Emanueloff, I., 15359
 Emberger, L., 6373
 7192, 7206
 Embree, N. D., 9220
 Emelianov, A. A., 1010
 Emenhiser, J. L., 4446
 Emerson, A. E., 8996, 8997
 Emerson, G. A., 11159
 12643, 12867, 13035
 13201, 13313, 16499
 Emerson, H., 15300, 15301
 Emerson, K., 17340
 Emerson, K. Jr., 8921
 4271, 14614, 14973
 Emerson, O. H., 12643, 13035
 Emerson, R. A., 8932
 Emerson, S., 12523
 Emery, F. E., 11225
 12643, 16413
 Emge, L. A., 597
 Emile-Weil, P., 4244, 5830
 Emlen, J. T. Jr., 10818
 Emmel, M. W., 9586, 17894
 Emmens, C. W., 3816
 3817, 9296
 Emmert, E. M., 1216, 15786
 Emmons, C. W., 16168
 Emsweller, S. L., 1699
 4871, 15601
 Emte, W., 15689
 Enami, M. S., 14656
 Ender, C. A., 12643
 Enders, C., 8569
 Enders, J. F., 6169, 9902
 Enders, R. K., 59
 732, 8493
 Endo, S., 821
 Ene, M., 14127
 Enescu, J., 5749
 Engard, C. J., 10319
 Engel, A., 10241, 14938
 Engel, C., 347
 Engel, D., 5471
 Engel, G. C., 7595
 Engel, L. L., 7901
 Engel, L. W., 3902
 Engel, P., 7540
 16604, 16659
 Engel, R. W., 324, 650
 2061, 9226, 16523
 Engelbreth-Holm, J., 2391, 2392
 Engelen, J. C., 13150
 Engelhardt, V. A., 7263
 Engelke, H., 2404
 Engelman, C., 2201
 Engelman, C. H., 5222
 Engloff, H., 9272, 16577
 Engle, E. T., 2120, 16605
 Englehorn, A. J., 17594
 Engler, A., 8390
 Engler, K., 4821
 Englerth, H. W., 4728
 English, L. L., 5025, 14145
 Enig, K., 5096, 10548
 Enin, T. K., 12524
 Ennor, A. H., 14617, 16338
 Enrico, M., 9297
 Enright, J. R., 15340
 Ensminger, L. E., 15528
 Ensor, C., 9193
 10933, 12643
 Ensworth, H., 17270
 Entenman, C., 3697, 3699
 Enzer, N., 2423
 Enzie, W. D., 15594
 Enzmann, E. V., 91
 1769, 8055
 Ephrussi, B., 4399
 Epling, C., 2857, 5268, 6404
 17521, 17522, 17523
 Eppson, H. F., 10179
 10776, 15092
 Eppstein, S. H., 7405, 9218
 Epstein, E., 16848
 Epstein, S., 11585
 Epsteins, F. F., 14368
 Erbring, H., 6467, 6619
 Ercooli, A., 5618, 5619
 Ercooli, N., 16296, 16297
 Erdmann, K., 12364
 Erdmann, W., 144
 Eredia, F., 12567, 14385
 Ergle, D. R., 1185, 13814
 Erhardt, A., 8688
 Erichsen, C. F. E., 6365
 8410, 15473, 17503
 Ericks, W. P., 12231A
 Ericksen, S. C., 16669
 Erickson, A. B., 5222, 10819
 Erickson, B. N., 1963, 7296, 7330
 10902, 12643, 14503
 Erickson, C. O., 414
 Erickson, C. W., 16762
 Erickson, E. T., 12643
 Erickson, H. D., 15519
 Erickson, J., 1398
 Eriksen, B., 7466
 Erikson, D., 2758
 Erikson, K., 2694
 Erikson, S. B., 6016, 6017
 Eriksson, H., 13931
 Eriksson-Quensel, I., 1344
 Erlandsson, S., 10712
 Erlanger, J., 447
 9483, 16694
 Ermen, J., 822
 Ernst, A. M., 5750
 5751, 9273
 Ernst, H., 10713, 12501
 Errington, P. L., 3536
 5222, 5230
 5375, 9066
 Erskine, D., 15188
 Erspamer, V., 2113
 Erve, J. van de, 3621
 Erwtaman, J., 8747
 Erxleben, H., 14889
 Esau, K., 1167
 1168, 3124, 17556
 Escarras, A., 7472, 12795
 Escarza, F., 17166
 Esche, P. von dem, 9841
 Escher, R., 1924, 12032
 Escherich, K. L., 3193, 8648
 Eschmeyer, R. W., 5401
 9051, 14408, 14411
 Escudero, L., 3777
 Eskelund, V., 15049
 Eskev, C. R., 8290
 Eskridge, L., 943, 1553
 Eslick, R., 10191
 Espe, D., 5667
 Espersen, T., 2145
 Espino, R. B., 17576, 17608
 Esselen, W. B. Jr., 2504, 3711, 11340
 11730, 13699, 17400
 Essenberg, J. M., 12695
 Essen-Möller, E., 8015
 Esseveld, H., 1011, 1677
 Essex, H. E., 362, 487
 7711, 12643, 16749
 Essig, F. O., 3189
 3348, 6915, 13015
 Esswein, A., 15405
 Estey, R. S., 12643
 Etkin, W., 448
 Etris, S., 15130
 Eta, H. N., 12643, 3178
 Ftteldorf, J. N., 9545
 Euclerio, C., 7770
 Euler, H. V., 2055, 2062
 7259, 13200, 13266
 14446, 16311, 17401
 Euler, U. S. v., 9077
 Eusterman, G. B., 14572
 Euw, J. v., 3891, 3893
 Ewan, B., 4711
 Evangelista, R. C., 787, 4424
 Evans, A. C., 6208
 15259, 15327
 Evans, A. W., 6366
 Evans, B. D. F., 7878
 Evans, B. H., 11391
 Evans, C., 6544
 Evans, C. A., 3965
 6168, 8789, 11788
 Evans, C. H. Jr., 1551
 Evans, C. L., 7706
 Evans, D. G., 4447
 8108, 8109
 Evans, E. A. Jr., 1682, 12407
 Evans, E. L., 12643
 Evans, F. C., 163
 Evans, F. G., 5163
 Evans, F. L., 8253, 11526
 Evans, F. R., 2754
 Evans, G., 3778
 Evans, H. M., 2867, 7244, 11159
 12643, 13035, 13201
 13313, 14622, 16615
 Evans, J. N., 13056
 Evans, J. W., 18016, 18017
 Evans, L. T., 3984
 Evans, M. E., 13415
 Evans, M. M., 15799
 Evans, M. W., 8981, 17708
 Evans, N., 13110
 Evans, R. D., 7281
 Evans, R. E., 4852
 4853, 15102
 Evans, R. J., 13178
 14542, 15107
 Evans, R. R., 6726
 Evans, T. A., 1195
 Evans, W. C., 8226
 Evans, W. E., 13178
 Evans, W. E. Jr., 3685
 Eveleth, D. F., 1277
 Evelyn, K. A., 1918
 1919, 1931
 Evenari, M., 10780, 12584
 Evensen, O. K., 2298
 Everett, J. W., 16660
 Everett, T. H., 15501
 Everling, W., 9956
 Everly, R. T., 3311, 6698
 Evers, N., 301, 5752
 Everse, J. W. R., 17247
 Ewins, D., 6254
 Ewan, J., 10158
 Ewen, W. T., 6482
 Ewert, B., 14774
 Ewing, H. E., 3314, 17979
 Ewing, K. F., 5026
 5029, 12230
 Ewing, M. E., 14537
 Exell, A. W., 6398
 Exline, H., 3317
 Eyer, J. R., 1482
 Eyer, S. W., 13178
 Eyermann, C. H., 7907
 Eyre, F. H., 10242
 Eysenbach, H., 15687
 Eyster, J. A. E., 5704
 7244, 12643
 Ezekiel, W. N., 1481
 Ezell, B. D., 8579, 15758
 Ezickson, W. J., 17248
 F
 Faber, K., 2378
 Fabergé, A. C., 3523
 Fabian, I., 12080
 Fabiani, G., 13416
 Fabricius, H. V., 17228
 Fabricius, L., 10243, 13932
 Facchini, A., 16578
 Faes, H., 2934
 Fagan, T. W., 6462
 Fage, L., 1860
 Fahey, J. E., 12176, 14149
 Fahey, K. R., 8117
 Fain, A., 5715
 Fairbanks, B. W., 7493, 12775
 Fairchild, D., 1681, 8495
 Fairman, H. D., 11576
 Falconer, B., 2252, 4193
 Faleev, A. V., 9090
 Falk, C. R., 8259
 Falk, I. S., 13654
 Falk, K. G., 3564
 4439, 10877
 Falke, H., 15006
 Falkenström, G., 5337
 Falla, R. A., 7001
 Fallis, A. M., 12216
 Falta, W., 14958
 Fanara, M. G., 13934
 Fangau, R., 2505
 Fangau, R., 4976
 Fankuchen, L., 5108
 Fantham, H. B., 11420
 Faraggiana, R., 823
 Farago, F., 823
 Fardon, J. C., 2042
 2041, 2042
 Farkas, B., 14284
 Farmer, C. J., 325
 2388, 10864
 Farmer, L., 4243
 Farmer, S. N., 7250
 Farness, O. J., 4640
 Farnham, W. B., 6751
 Farr, H. L. A., 15989
 Farr, L. E., 407, 11092
 Farr, W. K., 3102, 6445
 Farrar, M. D., 5074
 Farrell, M. A., 2541
 6287, 10041
 13706, 17815
 Fasciolo, J. C., 2379
 Fasciolo, J. D., 2142
 Fascio, U., 13783
 Pasquella, R., 2620
 Fassett, D. W., 4121
 9550, 11214
 Fassett, N. C., 10131
 Fasting, G. F., 2640
 Fattovich, G., 2410, 2411
 Faulkner, J. M., 11174, 11243
 Faull, J. H., 11816
 Faure, L., 11731, 11732
 Faure-Fremiet, E., 4945, 10520
 Faust, E. C., 3238
 3241, 17395
 Fautrez, J., 11334
 Fauvet, E., 9417
 Favre, J., 1075
 2801, 8398
 Favrelle, M., 6939
 Fawcett, G. L., 6530
 8528, 8610, 17801
 Fawcett, H. S., 1437, 1482, 3169
 6630, 15869, 15870
 15872, 17777, 17802
 Fawcett, R. A., 15512
 Fawcett, S. G. M., 10112
 Fay, M., 11219, 11220
 Fazekas, J. F., 7910
 2028, 7409, 7910
 7911, 9486, 12643
 12974, 13076, 14664
 Fazio, C., 17000
 Fazzari, I., 5888
 Fearnside, M., 11837
 Fearon, W. R., 13315, 16339
 Feder, J. M., 7991, 17330
 Federico, S., 8529
 Feemster, R. F., 3217
 Fegler, J., 13001
 Fehér, D., 15537, 17424
 Fein, M. J., 16849
 Feinberg, I. M., 13178
 Feinberg, S. M., 9828, 13417
 Feinstein, W. H., 2299, 2661, 9914
 Feist, K., 12019
 Feistman, E., 15420
 Feitelberg, S., 7760, 11221
 Fekete, E., 7832
 Fekete, Z., 1288
 Feldbach, I., 4930
 Feldberg, W., 520, 521
 Felding, S., 16928
 Feldman, H. A., 9987
 Feldman, J., 12643, 16538
 Feldman, J. B., 9664
 Feldman, M., 2105, 17056
 Feldman, W. H., 608
 6231, 15189
 Feldmann, J., 1065
 Feldt, A., 824
 825, 6138
 Felix, E. L., 3169
 Feller, A. E., 481
 Feller, W., 10671
 Fellers, C. R., 2504
 3711, 11340
 11686, 14565
 Fellman, W. H., 1012
 Fellows, O. N., 15222
 Fellows, E. J., 6545
 9546, 13178
 Fellows, H., 8602
 Fels, E., 14618
 Fels, S. S., 5588
 Felsen, J., 2532
 2641, 14487
 Felsenfeld, O., 9542
 Felson, H., 2109
 Felson, J., 7816
 Felt, E. F., 12205
 12478, 18002
 Felton, L. D., 826, 15137
 Fenaroli, L., 1147
 8530, 8531, 13766
 Feng, L. C., 8171, 8689
 12250, 17893, 17896
 Feng, T. P., 2253
 13074, 14717
 Fenn, W. O., 7508
 12643, 14743
 Fenner, F. Jr., 981
 Fenstermacher, R., 11733
 Fenton, E. W., 1066
 Fenton, F. A., 5042
 8930, 10391, 10457
 Fenton, H., 4230
 Fentress, E. W., 16466
 Fenz, E., 12881
 Feresten, M., 9418, 16638
 Ferguson, C. E., 13790
 Ferguson, E. A., 14955
 Ferguson, F. F., 6792
 8916, 12292
 12294, 12295
 Ferguson, J. H., 7296
 10902, 12643
 14503, 14504
 Ferguson, J. H. A., 1289
 Ferguson, J. K. W., 3629, 3833
 12643, 14808
 Ferguson, L., 2191
 Ferguson, T., 4272
 Fermi, E., 1906
 Fernald, A. T., 7360
 Fernandez, A. A., 13619
 Fernandez, L., 7801
 Fernando, M., 8344
 8629, 13688, 14053
 14074, 14075, 14099
 Fernando, P. B., 5753
 Fernholz, E., 16550

Ferrari-Freundlich

- Ferrari, N.,8582
 Ferrari-Lelli, G.,5889
 Ferraro, A.,12648
 Ferri, E.,13298
 Ferrière, C.,14266
 Ferris, E. B. Jr.,2266
 Ferris, G. F.,10605
 Ferris, H. W.,2094
 Ferris, R.,5207
 Ferroni, C.,12803
 Fershing, J. L.,14469
 Fester, Mme.,4654, 15224
 Fetisenko, I. V.,9095
 Feulgen, R.,16340
 Feustel, I. C.,17609
 Feutz, F.,2737
 Fevold, H. L.,7541, 7966, 9116
 9640, 12930, 14619
 Feyel, P.,13006
 Feyel, T.,13088
 Feytaud, J.,12188
 Fialka, S. M.,14850
 Ficht, G. A.,12189, 17768
 Fichter, E.,8998
 10518, 18105
 Fichter, M.,6546
 Ficke, C. H.,8602
 Ficker, M.,4449, 4450
 Fidler, E.,11014
 Fidler, J. C.,10221
 10323, 12094
 Fiedler, H.,12076
 Field, H. Jr.,2064, 5560, 5561
 5562, 7446, 16520
 Field, H. E.,4313, 10997
 Field, J. D.,9180
 Field, J. W.,4560, 8716
 Field, P. E.,2182
 Field, W. D.,8790
 Fieller, E. O.,14809
 Fierz-David, H. E.,8110
 Fieschi, A.,11811, 11812
 Fieser, L. F.,2355
 Fiessinger, N.,848, 14573
 Fife, J. M.,1482
 Fifield, O. C.,17602
 Figue, F. H. J.,1891, 12709
 Fikry, A.,3149
 Fildes, P.,4712, 8361
 Fildewicz, W.,2987
 Filhol, J.,4342
 7115, 8056
 Filippi, A.,5707, 9360
 Filippis, V. de.,2533
 Filippson, S.,9253
 Filmer, R. S.,14152
 Fio, E.,16771
 Finch, G.,3748
 Findlay, G. M.,2615
 6161, 9197, 9917
 15154, 15223, 15360
 Findlay, W. P. K.,15885
 Findley, T. Jr.,14980
 Finegan, R. W.,2114
 Fineman, Z. M.,3936
 Fingeland, A.,578
 Fink, L. D.,13178
 Finkelman, I.,14734
 Finkelstein, H.,947, 2610
 Finkelstein, M.,3228
 Finland, M.,827
 9918, 11586
 17132, 17183
 Finley, H. H.,17173
 Finley, C. B.,13075
 Finley, E. H.,11099
 Finley, K. H.,15007
 Finley, R. R.,1217
 Finner, L. L.,9668
 Finney, D. J.,1809, 16210
 Fiori, A.,8533, 15513
 Fiori, E.,5582
 Florio, C.,2534
 8227, 11527, 13801
 Firbas, F.,12585
 Firor, W. M.,961
 6174, 17116
 Firth, E. E.,16019
 Fischer, W.,14229
 Fischer, A.,5620
 17402, 17403
 Fischer, D. J.,9124
 Fischer, E.,8016
 8390, 9729, 12643
 Fischer, E. B.,4909
 Fischer, F. G.,4378
 Fischer, G. W.,14078, 15847
 Fischer, H.,12748
 12882, 12883, 16557
 17724, 17725, 17726
 17727, 17728, 17729
 Fischer, H. O. L.,10977
 10978, 10979
 Fischer, L.,13341
 Fischer, K.,796
 Fischer, M. H.,14449
 14450, 16298
 Fischer, O.,3818
 Fischer, R.,4112
 5716, 16772
 Fischer, W.,2535
 3902, 10378
 Fischer-Möller, K.,2455
 Fischnich, O.,3060
 Fish, C. H.,6305
 Fish, F. F.,10521, 15361
 2552, 2553
 Fish, R. H.,819
 Fishback, H. R.,11429
 Fishberg, A. M.,16646
 Fisher, A. M.,359
 Fisher, B. S.,11916
 Fisher, D. F.,8496
 13881, 15586
 Fisher, E. A.,13808
 Fisher, E. E.,13783
 Fisher, E. M.,5224
 Fisher, J.,163, 169
 3434, 10188, 14340
 Fisher, K. O.,12643
 Fisher, R. A.,3478, 3523, 5302
 8968, 16196, 16216
 Fisher, W. H.,3869
 Fisher, W. K.,10554
 Fishman, W. H.,7297
 Fisk, F. W.,14140
 Fisk, G. H.,8690
 Fisk, R. T.,6060
 Fisko, V. M.,9640, 14619
 Fissmer, E.,11476
 Fitch, C. P.,6232
 11734, 15362, 15363
 Fitch, H. S.,3403
 Fitzgerald, G. A.,15322
 Fitzgerald, O.,10903
 12813, 16919
 Fitzgerald, T. C.,15085
 Fitzgibbon, J. P.,14600
 Fitzhugh, O. G.,8749
 7797, 11248
 11249, 13178
 Fitzhugh, T. Jr.,522
 5828, 11310
 Fitzpatrick, E. G.,17610, 17611
 Fitzpatrick, F.,4603
 Fitzpatrick, F. K.,4586
 Flaherty, J. A.,16949
 Flaherty, E. W.,982
 9879, 17184
 Flake, J. C.,8077
 Flamm, G.,17140
 Flance, I. J.,13642
 Flanders, S.,3868
 Flanders, S. E.,1521
 10448, 14267
 Flaum, A.,17296
 Flaum, G.,379
 Fleck, L.,828, 2536
 Fleisch, A.,2338
 11021, 14805
 Fleischacker, H.,9780
 Fleisher, M. S.,13236, 17135
 Fleischman, A.,10921
 Fleming, A.,8179
 8185, 15190, 17136
 Fleming, C. A.,10639, 18060
 Fleming, F. A.,145
 Fleming, H. L.,8716
 Fleming, I.,5979
 Fleming, R. H.,16271
 Fleming, R. M.,5352
 Fleming, R. S.,10639, 18060
 Fleming, F. A.,145
 Fleming, H. L.,8716
 Fleming, I.,5979
 Fleming, R. H.,16271
 Fleming, R. M.,5352
 Fleming, R. S.,10639, 18060
 Flemming, M. P.,5871
 Fletcher, H.,2202, 13968
 Fletcher, J. P.,3636
 Fletcher, L.,6261
 Fletcher, R. K.,409
 Fleutiaux, E.,6873, 8766
 Flexner, J.,11222
 Flexner, L. B.,1964, 1990
 Flickinger, D.,3962
 Flinn, M.,14917
 Flint, L. H.,10320
 Flint, W. P.,10383
 17832, 17865
 Flippin, F. H.,17249
 Flippin, H. F.,13547, 17137
 Floch, H.,9961
 Floeck, E. V.,3658, 13089
 Flood, J. M.,11656
 Flora, C. C.,9811A
 Florence, C. H.,5485
 Florent, A.,10244
 Florentin, F.,3397
 Florentin, P.,16030
 Flores, F. B.,4825
 Florey, H. W.,363
 3601, 14574, 16564
 Florman, A. L.,1965
 Florschütz, F.,8422
 Florsdorf, E. W.,13418
 Floud, F.,1148
 11564, 4762
 Flous, Mlle. F.,2823
 Floyd, E. H.,5024
 Floyd, T. M.,16034
 Floyd, W. W.,6508
 Fluck, M.,9709
 Fluhmann, C. F.,4273
 9641, 12949
 Fly, C. L.,10791
 Flynn, C. S.,8242, 11659
 Foä, P.,5705
 Föckler, H.,1389, 6599
 Foerster, R. E.,5402, 5403
 Foglia, V. G.,3912
 4324, 16406, 16728
 Fohrman, M. H.,12549
 Fokin, A. D.,15800
 Foltch, J.,16341, 16342
 Földes, E.,16913
 Foley, E. F.,1973
 Foley, J. O.,7992
 Foley, J. P. Jr.,3985
 Foley, M. P.,11285
 Folger, H. T.,7615
 Folkers, K.,4903, 4904, 8558
 12020, 12841, 14563
 Folley, S. J.,3793
 7400, 7584, 11100
 12996, 14620, 16980
 Follis, R. H. Jr.,763
 829, 2328
 Folsom, D.,3169
 Folsom, J. W.,5027, 6943
 Foltz, V. D.,17381
 Fondard, L.,1744
 Fong, J.,11557
 Fontaine, M.,9052, 16502
 Fontaine, R.,5718
 Fontana, C.,1325
 Ford, D. C.,11703
 Foot, A. S.,15093
 Foot, N. O.,579
 Foot, S. S.,4673
 Foote, C. L.,16982
 Foote, J. J.,15028
 Foote, P. A.,1326
 Footter, A. W.,11259
 Forbach, V.,278
 Forbes, A.,2218
 5692, 12643, 16695
 Forbes, A. C.,10245
 Forbes, E. B.,14524
 15090, 16446
 Forbes, H. S.,4063
 Forbes, I. L.,3169, 15848
 Forbes, J. C.,7509
 Forbes, R. M.,16473
 Forbes, T. R.,16983
 Forbes, W. T. M.,10679, 16042
 Forconi, A.,11318
 Ford, C. B.,15305
 Ford, O. E.,40, 1700
 Ford, F. R.,560, 16407
 Ford, J.,164, 11747
 Ford, M.,19682
 Ford, S. K.,17097
 Ford, W. E.,12643
 Forker, G. M.,12492
 Forman, S.,18178
 Forman, S. E.,2215
 2314, 10980
 Fornarioli, P.,15705
 Forrester, J. S.,17163
 Forsdike, J. L.,8564
 Forsman, N.,13200
 Forssman, S.,3673
 Forst, A. W.,13152, 16778
 Forster, A. C.,7689
 Forster, D. E.,2643, 14594
 Forster-Cooper, C.,12494
 Försterling, K.,13182
 Fort, C. A.,17577
 17578, 17586
 Fortunesco, A.,13012
 Fortuyn, A. B. D.,5338, 5339, 14369
 2860, 6405, 8870
 Fosberg, F. R.,15489, 15502, 17524
 Fosbinder, R. J.,16818, 17250
 Fosdick, L. S.,13419
 Foshee, J. C.,16850
 Foster, A. G.,3169
 Foster, A. G.,8691
 15955, 17897
 Foster, A. S.,11917, 17557
 Foster, D. P.,4274
 Foster, F. L.,12643, 14685
 Foster, G. L.,7417
 Foster, H. H.,3169
 Foster, J. E.,16507
 Foster, J. W.,10296, 12061
 Foster, M. A.,14621
 Foster, R. C.,9642, 14621
 Foster, R. H. K.,4113
 Foster, W.,2114
 Foster, Z. C.,13856
 Fostvedt, G.,9299
 Fostvedt, G. A.,13178
 Foter, M. J.,2724
 Fothergill, L. D.,4604
 9902, 10078, 17129
 Fothergill, P. G.,14358
 Fouché, F. A.,18019
 Fouilloy, R.,5380
 Foulds, L.,16851
 Fourie, P. J.,5598
 6233, 6246
 Fourman, K. L.,1290
 Fourneau, E.,13142
 Fourneau, J. P.,13143
 Fournier, G.,4022
 Fournier, J. C. M.,9300
 Fourt, D. L.,1013
 Fourt, L.,12663
 Fouts, P. J.,4245, 9228
 Fowke, P.,12624
 Fowlds, M.,16169
 Fowler, A. F.,2013, 11353
 Fowler, E. D.,3004, 13856
 Fowler, J. L. A.,12643, 13000
 Fowler, R. H.,17295
 Fowler, T. F.,2993
 Fox, A. C.,14812, 18105
 Fox, C. L. Jr.,6139, 9108
 Fox, D. L.,1610, 3274
 Fox, E. H.,18092
 Fox, H.,6234, 9963
 15901, 16024, 16729
 Fox, I.,3318
 Fox, J. P.,5821
 Fox, M. J.,15242
 Fox, R. M.,12393
 Fox, T.,13154
 Foy, H.,6727
 Fracker, S. B.,1462
 Frade,733
 Frade, A. de.,10003
 Fraenkel, G.,3779
 Fraenkel-Conrat, H.,14622
 Frahm, E. E.,15736
 Frampton, V. L.,3169
 15822, 15823
 Franca, M.,13581
 Francois, J.,3624
 France, R.,322
 482, 2663
 Franceschetti, A.,7162
 Franche, M.,6199
 Francini, E.,10714
 Francis, C. C.,8017
 Francis, D. S.,5473
 Francis, E.,2670
 Francis, L. D.,249
 Francis, T. Jr.,820
 621, 627, 4451
 Francis, W. L.,9078
 Franck, C.,5608, 12927
 Francemont, J. G.,12394
 Franco, C. M.,12502
 Francois, E.,18
 6510, 6511
 François, L.,1186
 Frank, I.,9958
 Frank, J. A.,9419
 Frank, L. K.,8889
 Frank, M.,8347
 Frank, P. E.,12643
 Frankel, J. J.,6108
 Frankel, M.,7418
 Frankel, O. H.,15538
 Franken, J. L. M.,7076
 Frankena, H. J.,17579
 Frankenberger, Z.,8750
 Franklin, G. C. H.,9977
 Franklin, H. J.,17622
 Franklin, K. J.,476
 2095, 13111
 Franklin, M. T.,1431
 Franks, W. R.,16852
 Franseen, C. C.,3819, 12979
 Fransen, J. J.,17885
 Frantz, F. A.,8936
 Franz, V.,10660
 Franzén, D.,15573
 Fraps, G. S.,320, 4826, 6509
 13351, 17612, 17627
 Fraser, A. H. H.,3698, 6728
 Fraser, A. M.,9301
 Fraser, D. T.,1484
 Fraser, F. C.,16319
 Fraser, H. F.,7894, 16512
 Fraser, J. H.,10794
 Fraser, L.,3502, 12556
 Fraser, R.,16929
 Fraser, W. P.,10109
 Fray, W. W.,368, 369
 Frayser, L.,7819
 Frazer, A. C.,7342
 Frazier, C. N.,817
 Frazier, W. A.,13917
 Frazier, W. C.,1037
 Frazier, W. D.,7521
 Frear, D. E. H.,3212
 Frebold, H.,5082
 Fréchnos, G.,2014
 Fred, E. B.,11788
 Fredericq, H.,5754
 Frederiksen, O.,2391, 2392
 Fredricksen, M. T.,120
 Freed, H.,7917, 16722
 Freed, S. C.,2121
 Freedlander, S. O.,17165
 Freeman, G.,2616, 6185
 2254, 7680
 Freeman, H.,3665, 12643
 Freeman, H. E.,12643
 Freeman, M.,8193
 Freeman, N. E.,3630
 Freeman, T. N.,10616
 Freeman, V. A.,7139
 Freeman, W.,351, 7897
 Freer, R. S.,11904
 Freerkaen, E.,8004
 Frei, W.,8318, 13626
 Freise, F. W.,2935
 10246, 13854
 Freisling, J.,10609
 Freitag, J. H.,3132, 17778
 Frel, W.,4587
 Fremery, P. de.,9302
 9303, 11052
 Frémy, P.,13719
 French, C. S.,13714
 French, E. L.,4350
 French, M. H.,1552
 French, R. P. C.,4452
 Frenzel, B.,2426
 Frerejacque, M.,13734
 Frerichs, J. B.,3980
 Fress, R.,15801
 Freshman, A. W.,7833
 Freud, J.,3820
 3925, 3966, 5621
 7585, 9304, 9305
 12939, 12946, 12948
 12950, 14440, 17038
 Freudenberg, K.,10329, 14440
 Freudenberg, C. B.,13802
 Freund, J.,830
 9852, 11520
 Freundlich, J.,4064

- Frey, C. N., 16933
 Frey, D. G., 9053, 14409
 Frey, E., 7681, 10116
 Frey, R. W., 6458
 Frey-Wyssling, A., 8447
 12646, 17689
 Frick, J., 4885
 Frick, L. P., 6127
 Frick, O., 2552, 2553
 Fricke, H., 8631
 Fricke, J. W., 11589
 Frickers, J., 15956, 15979
 Friedberg, C. K., 11175
 Friedberg, L., 12643, 14822
 Friedberg, W., 6821
 Friedel, J., 2906, 11884
 Friedel, S., 9843
 Friedell, H. L., 5720
 9522, 9523, 13120
 Friedemann, T. E., 10082, 10904, 17452
 Friedemann, U., 8111
 8112, 8113, 8114
 11528, 11529, 11530
 Friedenreich, V., 935
 Friedenenson, M., 16647
 Friedenwald, J. S., 2203
 Friedewald, W. F., 13420
 Friedgood, H. B., 3666
 11101, 12643
 Friedheim, E. A. H., 3090
 Friedlander, M., 13421
 Friedlander, R. D., 11176, 11223
 Friedman, A., 637
 Friedman, B., 2300
 9406, 9516
 Friedman, G. J., 9237, 12643
 Friedman, G. S., 9306, 14624
 Friedman, L., 16299
 Friedman, M., 2143, 11181
 9306, 14623, 14624
 Friedman, M. H. F., 9254, 11030, 12643
 Friedman, N. B., 12750, 14880
 Friedman, T. B., 17138
 Friedmann, E., 5461
 Friedmann, H., 5207, 18061
 Friedrich, A. M., 6385
 Friedrich, H., 12303, 12304
 Friedrich-Freksa, H., 9307
 Friend, D., 1813
 Friend, D. G., 9117
 Friend, R. B., 12206
 Fries, N., 12065
 Fries, R. E., 2865
 Friesen, H., 5340
 Frimodt-Møller, J., 13700
 Frisch, A. W., 2537
 4612, 9844
 Frisch, R., 8671
 Frisk, A. R., 2126
 Fritsch, H., 14229
 Fritsch, R. S., 13422
 Fritze, R., 17978
 Fritzsche, E. H., 1924
 Fritzsche, H., 2087
 3846, 12031, 12032
 Fritzsche, K., 6235, 6236
 Frizzell, D. L., 12315
 Froese, H., 661
 Froggatt, J. L., 5017
 8635, 8636, 14107
 Fröhlich, J., 17648, 17649
 Frohne, W. C., 107, 8999
 Frohning, W. O., 11735
 Fröhlich, G., 5980, 13389
 Frolo, M., 15428
 Fromageot, C., 6605, 6610
 Froment, R., 14821, 16935
 Fromherz, H., 12685
 Fronza, F. M., 787
 4428, 4424
 6018, 17094
 Frost, C. A., 12344
 Frost, D. V., 12838
 Frost, H. B., 1745, 8497
 Frost, J. N., 6256
 Frost, S. W., 12865
 Frost, T. T., 2158
 Frostig, J. P., 7911, 12643
 Fruton, J. S., 5445
 5455, 14451, 14463
 Fry, D. H. Jr., 18093
 Fry, E. G., 12643
 Fry, F. E. J., 12643
 Fry, W. E., 523
 Frye, W. W., 6746
 Fuchs, A. M., 14854
 Fuchs, H., 261
 7761, 16343
 Fuchs, H. G., 12800, 12801
 Fuchs, R. T., 524
 Fudge, B. R., 8620, 14071
 Fudge, J. F., 1481, 17627
 Fuelleman, R. F., 11942
 Fuertes, L. A., 16082
 Fuertes, M. G., 16696, 16704
 Fujii, M., 1187
 Fujii, S., 5297, 8914
 Fujii, S., C. K., 12793
 Fujita, A., 1920, 1921
 Fujita, K., 831
 Fujiwara, T., 4206
 4214, 4215
 12845, 12846
 Fukin, T., 9147
 Fukuda, S., 13090, 13091
 Fukuhara, R., 12749
 Fukui, K., 11224
 Fukushima, K., 13559
 Fukuzumi, S., 8154
 Fulford, M., 3435, 4744
 Fullaway, D. T., 3182
 Fuller, A. T., 8115
 9988, 15260, 15278
 Fuller, C. F. H., 1024
 Fuller, G. L., 13856
 Fuller, J. E., 13699
 Fuller, M., 6898, 6899
 Fulmer, E. I., 14440, 15738
 Fulmer, S. C., 9967
 Fulton, J. D., 15953
 Funiello, L., 15637
 Funk, C., 12839, 14559
 Funk, E. M., 17095
 Funk, G., 68
 Funk, I. C., 12839
 Funke, G. L., 1371
 1879, 1415
 Funke, H., 12074
 Funkquist, P., 15324
 Furchgott, R. F., 7329
 Furelow, M. L., 17364
 Furlong, C. R., 10221
 Furnas, C. C., 3416
 Furnish, W. M., 5119
 Furry, M. S., 12021
 Furter, M., 7494
 Firth, E., 4194
 Furth, J., 573
 580, 2356
 Furth, O. B., 580
 Furuta, W. J., 18265
 Fuse, T., 7771
 Fustinoni, O., 3821
 Futch, M. C., 8068
 Futch, T. B., 2096
 Fyfe, R. V., 1829
- G**
- Gaarenstroom, J. H., 5621, 5667A, 9382
 11053, 16606, 17043
 Gäbler, H., 8649
 10430, 10431
 Gabrichidze, N. M., 15539
 Gabriel, A. G., 12494
 Gabriel, J. E., 12643
 Gaddum, J. H., 5622, 12884
 Gaebler, O. H., 14625
 Gaensbauer, F., 12934, 14626
 Gaessler, W. G., 10176
 Gafafer, W. M., 14988
 Gaffron, H., 14015
 14016, 14440
 Gaffron, M., 12643
 Gage, C. E., 10187
 Gager, C. S., 12481
 Gager, E., 8751
 Gage, A. P., 3670
 Gagne, R. M., 11123
 Gagnepain, F., 1114
 1115, 2861
 Gaillard, P. J., 3822
 9052, 12951
 Gaines, J. A., 3824
 Gaines, J. C., 5028
 5029, 10409, 10413
 Gaines, J. G., 1456
 Gaines, R. C., 5040, 5075
 Gaines, S. H., 7084
 Gaines, W. L., 2484, 15108
 Gairdner, A. E., 5307
 Gaisinskaia, M. U., 2027
 Gajatto, S., 16408, 16648
 Gajdos, A., 348
 Gal, M. E., 10854
 Galbadon, A., 12215
 Gale, E. F., 14452
 Galgano, M., 1720, 13330
 Galiant, M., 2892
 Gall, L. S., 15269
 Gall, O. E., 6481
 Gallagher, F. H., 17453
 Galligar, G. C., 4925, 15728
 Galloway, I. A., 13592
 Gallup, W. D., 2695
 2696, 7450, 9165
 Galpin, N., 17096
 Galvão, A. A., 10490
 Galvão, P. E., 5485, 5849
 Galvez, N. L., 8482, 17613
 Galvato, M., 9496
 Gamble, J. A., 2485, 8078
 Gambrell, E., 12273
 Gammon, G. D., 7451
 Gams, H., 3488
 Ganapati, P. N., 1732
 Gandellini, A., 1314
 Gander, F. F., 2898
 Gandolfo, A., 4195
 Gane, R., 10042, 10813
 Ganguly, H. D., 10989
 Ganguly, R., 267, 410
 Ganguly, S. C., 5740
 Gannon, C. F., 5850
 Gantt, W. H., 12643
 Garand, N. D., 14610
 Garbarino, G., 510, 16816
 Garbutt, H. R., 12718
 Garcés, C. B., 4453
 Gard, S., 9845, 11635
 Gardberg, M., 13112
 Gardiner, A. O., 7222
 Gardiner, E. M., 14375
 Gardiner, S. H., 14676
 Gardner, H. L., 13178
 Gardner, J. C. M., 8791
 Gardner, M. W., 4980
 Gardner, R., 10338, 17743
 Gardner, R. E., 581, 4196
 Gardner, V. R., 10220, 13878
 Gardner, W. U., 609
 2371, 3883, 5808
 12966, 12996, 12997
 Gardosi, D., 4337, 9691
 Gareiso, A., 14922
 Garello, A., 7762
 Garey, J. C., 13706
 Garland, E. A., 12022
 Garland, H., 8448
 Garland, L. H., 14468
 Garling, M., 16070
 Garman, P., 15896
 Garmal, P., 1980
 Garner, F. H., 4409
 15540, 15541
 Garner, H. V., 4827
 Garner, W. W., 15542
 Garnett, A., 16235
 Garrard, E. H., 11762
 Garren, K. H., 3139, 15470
 Garrett, A. W., 9914
 Garrett, O. F., 15110, 15402
 Garrett, R. T., 15191
 Garrett, S. D., 1419
 3140, 5001, 6668
 Garrett, W. P., 9801
 Garrod, L. P., 567
 Garry, R. C., 7682, 12880
 Garstang, W., 16004
 Gärtner, K., 8331
 Gartside, H., 3823
 Garven, H. S. D., 7682
 Garvin, C. F., 13230
 Garvin, T., 7993, 9989
 Garzia, G., 6729
 Gaskill, J. O., 6468, 12099
 Gasnier, A., 12776
 Gáspár, I. A., 7563
 Gass, R. S., 2683
 Gasser, H. S., 14718
 Gastrock, E. A., 2725
 Gatenby, J. B., 1721, 8915
 Gates, F. C., 1149, 1150
 Gates, G. E., 6812
 Gates, H. E., 2862
 Gates, R. R., 40
 8018, 17229
 Gates, W. H., 8863, 9308
 Gatet, L., 12854
 Gathercoal, E. N., 1329
 Gathy, H., 13933
 Gatty, O., 9078, 16295
 Gätzl, K., 3892, 3985
 Gaudin, A., 12345
 Gaudin, O., 1525
 Gauer, O., 16730
 Gaud, R. I., 5795
 Gäumann, E., 8578
 Gaunt, R., 380
 5623, 12952, 14561
 Gaunt, W. E., 17139
 Gaupp, R., 13237
 Gause, G. F., 13002, 17454
 Gaussen, 1148
 Gaussen, H., 1146
 1151, 1153, 1154
 1155, 1156, 1156A
 Gautheret, R., 1364
 16151, 17700
 Gautheret, R. J., 1372
 Gavaudan, N., 12503
 Gavaudan, P., 12503
 Gavin, G., 3724, 9231
 Gavril, J., 14960
 Gavrilov, W., 15224
 Gavrilov, W., 4654
 Gay, C. W., 5981
 Gay, F. J., 1829
 Gay, F. P., 9919
 Gayda, H. S., 12434
 Gayden, J. H., 5024
 Gayet, R., 5668
 Gaywala, P. M., 8461
 Gazin, C. L., 5225, 18094
 Gear, J. H. S., 8291
 Gebhardt, E., 16071
 Gebhardt, H., 7763, 16774
 Gebhardt, L. P., 9953
 Geddes, W. F., 15543
 Geerling, M. C., 9302
 Geeslin, L. E., 11348
 Gehenio, P. M., 1402, 1903
 Gehrmann, G. H., 15302
 Geib, W. J., 1219, 15577
 Geiger, A., 2056
 9244, 14719, 16552
 Geiger, E., 5755
 Geiger, J. C., 6738
 8292, 10014, 15303
 Geiger, W. B. Jr., 15814
 Geiling, E. M. K., 1682, 5650
 Geinitz, H., 6467, 6619
 Geipel, 9731
 Geiringer, M., 2301
 Geist, O. W., 7002
 Geist, S. H., 2125
 3824, 9366, 12953
 Geiter, C. W., 4045
 Geitler, L. V., 1067, 3287, 6367
 Gelarie, A. J., 16896
 Gelci, J. v., 6765, 10522
 Gelfand, H. H., 17140
 Gellhorn, E., 4065, 5699
 7544, 7654, 12643
 12814, 13153, 14715
 14738, 16731, 16747
 Gelperin, A., 15340
 Gemeinhardt, K., 4956
 Gemmel, Mrs. G. P., 7003
 Gemmell, A. R., 3134
 6641, 17747
 Gemmill, C. L., 12643
 Gendre, H., 4361
 Genell, S., 16661
 Genevois, L., 12854
 Genkin, A. M., 7343
 Genna, G. E., 8960
 Genner, V., 5902
 Gentner, W., 5544
 Geoghegan, W. A., 12643
 George, I. D., 6977
 George, W., 6728
 George, W. C., 16963
 Georgesco, I. D., 16409, 16410
 Georgescu, C. C., 8503, 15514
 Georgi, C. D. V., 12028
 Georgi, C. E., 17467
 Georgette, 7004
 Gérard, C., 8681
 Gerard, R. W., 463, 2021
 2220, 4014, 5691
 5696, 11144, 12643
 Gerbay, F., 16412
 Gerber, I. E., 2357
 Gerber, L. P., 12806
 Gerber, R., 5175, 16071
 Gerdell, E. W., 10205
 Gerdes, F. L., 17580
 Gerhardt, F., 8579, 15758
 Gerhardt, U., 14230
 Gerlach, 6167
 Gerlach, F., 4588
 Gerlaugh, P., 2486, 5981
 Gerlings, J. H. J., 4886
 Germain, L., 3297
 German, B., 6139
 German, E., 1744
 German, W. C., 16853
 German, W. M., 4368
 7994, 7995
 Gerngross, O. G., 1010
 Gerrits, J. O., 7452
 Gersbacher, E. O., 5372
 7005, 10371
 Gersch, M., 14206
 Gerschman, R., 16406
 Gerschpacher, H., 6281
 Gersdorf, C. E. F., 12667
 Gersdorff, W. A., 16775
 Gersh, I., 3945, 4388
 9692, 9846, 11054
 Gershberg, H., 9699
 Gershon-Cohen, J., 5588
 Gerstenberg, H. W., 7518
 Gerstenberger, H., 12816
 Gerstner, H., 16300
 Gertz, O., 10700, 12101
 Gesell, A., 7616
 Gesell, R., 7244, 12643
 Gessner, F., 12610, 14011
 Gettler, A. O., 7298
 Gettys, W., 2972
 Gey, G. O., 12643
 Geyer, E., 8019, 9732
 Geyer, F., 14234
 Geyer, H., 9733
 Geyr, H. B., 5177
 Geyskes, D. C., 5018
 Gêze, B., 12241
 Ghahn, A. A. E., 3183
 Ghaliongui, P., 5844
 Gheardi, F., 5890
 Ghigi, E., 16558
 Ghiselli, E. E., 2173
 2176, 2176
 Gholmy, A. A., 2350
 Ghosal, S. C., 6310
 Ghose, T. P., 10466
 Ghosh, B. N., 4655
 6048, 6050
 Ghosh, J. C., 7485
 Ghosh, S., 1320, 1321
 Giacobbe, A., 15638
 Giacomini, V., 11838, 15477
 Gibb, D. C., 121
 Gibbard, J., 11687
 Gibbins, E. G., 12494
 Gibbons, R. J., 11689
 Gibbons, S. G., 16272
 Gibbons, W. J., 15957
 Gibbs, F. A., 449, 12643
 Gibelli, C., 8624
 Gibson, B., 16304
 Gibson, E. J., 5679
 Gibson, F., 1327
 Gibson, J. G. 2nd, 1922
 2267, 2268, 13253
 Gibson, K. E., 10410
 Gibson, R. B., 7303
 Gibson, W. R., 14575

- Giddings, G., . . . 16711
 Giddings, N. J., . . . 1482, 15886
 Giebel, A., . . . 4168
 Giesdow, B., 5897, 7479
 7480, 9309, 9310
 Giemsa, G., . . . 8248
 Gierson, H. W., . . . 9848
 Giese, A. C., . . . 3260
 5099, 9102
 10523, 12686
 Giesekeing, J. E., . . . 2966
 Gieseler, W., . . . 9734
 Giesen, J. T., . . . 14758
 Gifford, M. A., . . . 4639
 Giglioli, G., . . . 5090
 Giglioli, G. R., . . . 13744, 15531
 Gilbert, C. H., . . . 8672, 15926
 Gilbert, C. M., . . . 8730
 Gilbert, C. S., . . . 10179
 10776, 15092
 Gilbert, P. A., . . . 10640, 18062
 Gilchrist, M. L., . . . 16820
 Gilcreas, F. W., . . . 11777
 Gilder, H., . . . 12643
 Gildow, E. M., . . . 1013, 3467
 Giles, LeR. W., . . . 5226
 Giles, N., . . . 10715
 Gillallan, F. A., . . . 1828
 Gillallan, R. S., . . . 6084
 Gilg, . . . 2865
 Gilg, C., . . . 2863, 10132
 Gilgut, O. J., . . . 3150
 Gill, A. M., . . . 4275
 Gilliam, A. E., . . . 12607
 Gilliam, W. S., . . . 11964
 Gillespie, H. B., . . . 13701
 Gillespie, J. E. O. N., . . . 7908
 Gillespie, R. W. H., . . . 2759, 2760, 2761
 Gillett, J. A., . . . 12186
 Gillett, R. E., . . . 13539
 Gilliat, F. C., . . . 10389
 Gilligan, G. M., . . . 17614
 Gilliland, H. B., . . . 2894, 8423
 Gillis, L., . . . 4266
 Gillman, J., . . . 12447
 Gillman, A., . . . 13173
 Gillman, B. B., . . . 983
 Gillman, H. L., . . . 15364
 Gillman, J. C., . . . 12099
 Gilmer, P. M., . . . 5031
 Gilmore, C., . . . 3404, 18052
 Gilmore, J. U., . . . 5030, 5067
 Gilmour, J. R., . . . 2439, 4339
 Gilmour, J. S. L., 10133
 Gilmour, W., . . . 7935
 Gilroy, A., . . . 15958
 Gilson, A. S. Jr., . . . 11177, 14759
 Gilson, G., . . . 146
 Gilson, W. E., . . . 5704
 Giltner, L. T., . . . 13580
 Gingold, N., . . . 18149, 18254
 Gingrich, N. S., . . . 8169, 15834
 Gini, C., . . . 7170
 Ginsberg, A. M., . . . 4066
 Ginsberg, J. E., . . . 17141
 Ginsburg, J., . . . 3412
 Ginsburg, I., . . . 10623, 10624
 Ginsburg, I. W., 11173
 Ginsburg, J. M., . . . 3211
 Ginsel, L. A., . . . 10867
 Ginzton, L., . . . 575
 Giordan, P., . . . 7705
 Giordano, A., . . . 9973
 Giordano, A. S., . . . 8260
 8261, 8262
 9118, 9119
 Giordano, G., . . . 8897, 13767
 Giordano, J. J., . . . 7817
 Giorgio, A. M. di, . . . 16579, 16580, 16581
 Giovannola, A., . . . 3242, 8717
 Girard, A., . . . 17262
 Girard, G. L., . . . 9067
 Girard, H., . . . 13529
 Girard, M., . . . 12876
 Giri, K. V., 5524, 11015
 Giroud, A., 2072, 16580
 Girty, G. H., . . . 3291
 3292, 14231
 Gisselsson, L., . . . 1950
 Githens, T. S., . . . 15138
 16061, 17142, 17143
 Giudice, V. del, . . . 9593, 13202
 Givner, L., . . . 15050
 Gjessing, E. C., . . . 13379
 Glading, B., . . . 1878
 Gladney, H., . . . 5059
 Gladstone, G. P., . . . 4454
 8361, 15414
 Glaser, E., . . . 5756, 17667
 Glaser, F., . . . 11050
 Glass, S. J., 651, 14959
 Glass, V., . . . 4621
 4622, 9847, 15415
 Glass, W. E., . . . 7397
 Glassey, T. W., . . . 10211
 Glasstone, S., . . . 5957
 Glavind, J., . . . 1961
 9244, 16546, 16917
 Glazko, A. J., . . . 3545, 3632
 Gleason, H. A., . . . 10782
 17525, 17526
 Glen, A., . . . 7398
 Glenn, P. M., . . . 9544
 Glenny, A. T., . . . 832
 Glenny, F. H., . . . 9775
 Gley, P., . . . 14787
 Glick, D., . . . 3555, 7264
 3556, 6051, 7264
 Glick, P. A., . . . 10767
 Glickman, N., . . . 12643
 Gliemerth, G., . . . 69, 15544
 Glimm, P., . . . 14928
 Glock, G. E., . . . 5456
 Glogowska, H., . . . 8042
 Gloer, K., . . . 3083
 Glover, J., . . . 14393
 Glover, P. E., . . . 1838, 9014
 Glover, P. M., . . . 14102
 Glover, R. E., . . . 11522
 11569, 11570, 15225
 Gloyd, L. K., . . . 12402, 12403
 Glück, H., . . . 17514
 Glücksman, A., . . . 4387
 Gluecksohn-Schoen, . . . 5717
 heimer, S., 734, 12548
 Glynn, J. H., . . . 8355
 Gnadinger, C. B., . . . 8042
 Gnosselius, A., . . . 15139
 Gobeil, A. R., . . . 12207
 Goda, T., . . . 4690
 Godard, . . . 2936
 Godard, G., . . . 16742
 Godard, D. R., . . . 3136
 Godden, W., . . . 3698, 5511
 Godfrey, A. B., . . . 10747
 Godfrey, G. H., . . . 10188
 Godfrey, R. K., . . . 3169
 Godfried, E. G., . . . 7344, 16411
 Godina, G., . . . 11410
 Godlewski, H., . . . 3409
 Godoy, E. F., . . . 15802
 Godwin, H., . . . 1122
 10687, 16257
 Godwin, M. C., . . . 4879
 Goebel, F., . . . 7531
 Goebel, W. F., . . . 838
 Goepf, R. M. Jr., 12024
 Goerner, A., . . . 11286
 Goerner, M. M., . . . 12366
 Goetghebuer, . . . 12366
 Goetghebuer, M., . . . 6900
 Goettsch, E., 1993, 1999
 Goettsch, M., 7683, 9217
 Goetz, A., . . . 1400
 Goetz, R. H., . . . 16732
 Goetz, S., . . . 1400
 Goffart, H., . . . 4973
 Goffart, M., . . . 14657, 14810
 Goffin, R., . . . 14576
 Gohrbandt, L., . . . 10617, 18043
 Goia, J., . . . 14960
 Goidsenhoven, C. v., . . . 13602
 Goirdano, G., . . . 12003
 Goke, A. W., . . . 11965, 17615
 Gokhale, S. K., . . . 5503
 Gok, H., . . . 6052
 18154, 13178
 Goldberg, E., . . . 4917
 Goldberg, H., . . . 5704, 12643
 Goldberg, H. E., . . . 5744
 Goldberg, L., . . . 1329
 Goldberg, M., . . . 17442
 Goldberg, M. W., . . . 3825
 Goldberg, S. A., 14881
 Goldberg, S. L., . . . 9855
 Goldberger, E. W., . . . 16827, 17214, 17358
 Goldblatt, H., . . . 2271
 9517, 16514
 Goldbloom, A. A., . . . 4067
 Golden, F., . . . 16973
 Golden, A., . . . 9848
 Golden, J. B., . . . 381
 5633, 5634, 16618
 Goldfarb, W., . . . 3687
 12643, 16776
 Goldfeder, A., . . . 14469
 Goldie, H., . . . 13423
 Goldman, E. A., . . . 5227, 5228, 5229
 7039, 7040, 8864
 10661, 10662, 14309
 14312, 18095, 18096
 Goldman, F., . . . 7717
 Goldman, L., . . . 12643
 Goldman, M. M., 12643
 Goldner, J., . . . 9603
 Goldring, W., . . . 9531, 12643
 Goldschmidt, R., 16208
 Goldschmidt, S., . . . 9255, 12643
 Goldschmidt, W. B., . . . 10380
 Goldshine, A. D., 11160
 Goldsmith, G., . . . 11016
 Goldsmith, G. A., 12855
 Goldstein, B. I., . . . 2073, 3783
 Goldstein, F., . . . 2607
 10499, 15374
 Goldstein, H. L., 2097
 Goldstein, K., . . . 10672
 Goldstein, M. S., . . . 11495, 17014
 Goldston, E. B., . . . 2972
 Goldsworthy, M. C., . . . 3108, 3109, 15871
 Goldsworthy, N. E., . . . 4628, 4629, 6202
 Golick, A. M., . . . 2724
 Gollwitzer-Meier, K., . . . 5717
 Golob, M., . . . 4613
 Gomes, M., . . . 12489
 Gomez, E. T., . . . 3826, 9335
 Gomez, F., . . . 16423
 Gómez, L. A., . . . 1239
 Gomez-Orbaneja, J., . . . 17144
 Gomori, G., . . . 12750
 15044, 15045, 15046
 Gompel, M., 3494, 3667
 Gonggrijp, J. W., . . . 4906
 Gonggrijp, L., . . . 13934
 Gontarski, H., . . . 14288
 Gonzalez, B. M., . . . 7085
 González, J. M., . . . 10936
 González, L. M., . . . 4486, 18241
 Good, N. E., . . . 18035
 Goodchild, C. G., 10537
 Goode, W., . . . 17351
 Goodell, H., . . . 12643
 Goodell, M., . . . 7799
 Gooden, E. L., . . . 12233
 Goodenough, B. H., 5876
 Goodey, T., . . . 1432
 1603, 6642
 Goodhart, C. B., 10795
 Goodhart, R., . . . 2387
 Goodhue, L. D., . . . 12238, 12239
 Goodier, T. E. W., 5757
 Goodman, J., . . . 15140
 Goodman, L., . . . 13173
 Goodman, M. H., 13424
 Goodpasture, E. W., . . . 698, 11614
 3750, 12643
 Goodrich, A. L. Jr., 9783
 Goodrich, H. B., 12550
 Goodrich, J. P., 13342
 Goodspeed, T. H., . . . 6433, 8933
 Goodwin, G. G., . . . 7041, 7042
 Goodwin, M. H. Jr., . . . 12273
 Goodwin, M. W., . . . 3169, 12179
 Goodwin, R. H., . . . 6566, 10299
 Goodwin, T. C., . . . 2345
 Gooden, E. B., . . . 4616
 Goor, H. van., . . . 7265
 Goorley, J. T., . . . 849
 Goormaghtigh, N., 2083
 Goossens, N., . . . 12716
 Goossens, A. P., . . . 13745
 Goossens, N., . . . 5454
 Gopala Aiyar, R., . . . 3379
 Gopalakrishnan, V. R., . . . 2712
 G6pfert, H., . . . 9485
 Gossip, W. L., . . . 6730
 Gorbach, G., . . . 14153
 Gorce, de la., . . . 2219
 Gordina, A. P., . . . 888
 Gordon, A., . . . 13809
 Gordon, B. L., . . . 14325
 Gordon, C., . . . 16197
 Gordon, F. B., . . . 2616
 11531, 11615
 Gordon, H., . . . 9964
 Gordon, H. H., . . . 7414
 Gordon, J. E., . . . 13425
 Gordon, M., 582, 16854
 Gordon, R. D., . . . 2762
 2763, 17455
 Gordon, S. M., . . . 4305
 Gordon, W. G., . . . 5536, 12304
 Gordon, W. H., . . . 4068, 14776
 Gordon, W. L., . . . 3169
 Gordon, W. T., . . . 8370
 Gordonoff, T., . . . 5758
 Gore, J. T., . . . 3751
 Gore, U. R., . . . 1481
 Goresky, L., . . . 279
 835, 2538, 4561
 Goresline, T. M., 17740
 Goresline, H. E., . . . 1020
 Gorham, F. W., . . . 3752
 Gorin, M. H., . . . 10833, 13390
 Gorini, C., . . . 6262
 Gorukhina, T. A., 9496
 Gordner, A. C., . . . 14756
 Gorrie, R. M., . . . 9015
 Gorter, E. J., . . . 9221
 Gorter, F. J., . . . 316
 Gortner, R. A., . . . 13941
 Gortner, W. A., . . . 4887
 Goshorn, R. H., . . . 4656
 Goshlin, R., . . . 14312
 Goss, C. M., . . . 4048
 Goss, H., . . . 16506
 Goss, W. L., . . . 15545
 Goswami, H., . . . 5525
 Goto, K., . . . 4963
 Gotsev, T., . . . 8633
 Gotsdenker, F., 819, 820
 Gottlieb, B., . . . 4306
 Gottlieb, M., . . . 14040
 Gottschaldt, K., . . . 1786, 9735
 Gottschall, R., . . . 534
 Gottschall, R. Y., 13415
 Gottschewski, G., . . . 90
 13341, 16198
 Götz, . . . 4888
 Goudsmit, A. Jr., . . . 7564, 12643
 Gould, G. E., . . . 17871
 Gould, G. M., . . . 7243A
 Gould, H. N., . . . 17015
 Goulden, C. H., . . . 1810
 Gouley, B. A., . . . 2802
 Gourévitch, A., . . . 6554, 12840
 Gourley, J. H., . . . 2988
 13855, 14092
 Gousseff, W. F., . . . 1587, 3271
 Goux, L., . . . 8784
 Gouzon, B., . . . 14406, 16400
 Govaerts, J., . . . 1678
 Govaerts, P., . . . 2144
 Gowe, D. E., . . . 12855
 Gowen, J. W., . . . 5472
 Gower, W. C., . . . 1591
 5259, 10538, 17931
 Goyal, R. K., . . . 8116
 Goyle, A. N., . . . 6186
 Grabar, P., 848, 13480
 Graber, L. F., . . . 1203
 Graber-Duvernay, J., . . . 16412
 Grabfield, G. P., . . . 5654, 9399
 Grace, A. W., . . . 13426
 Grace, N. H., . . . 12070
 Gradwohl, R. B. H., . . . 17230
 Graf, H., . . . 1852
 Graf, O., . . . 16777
 Graff, J., . . . 2109
 Graff, S., . . . 14882
 Graff, U., . . . 7352
 Graffin, A. L., . . . 11460
 15028, 15029
 16984, 16985
 Graham, A., . . . 8740
 Graham, C., . . . 17869, 17886
 Graham, C. H., . . . 7633, 7634
 Graham, C. P., . . . 5025
 Graham, D., . . . 8176
 Graham, E. R., . . . 13790
 Graham, G., 2342, 2655
 Graham, G. L., . . . 15959, 17953
 Graham, H. T., . . . 12643
 Graham, J. S., . . . 12643
 Graham, L. T., . . . 6915A
 Graham, M., . . . 147
 1848, 5404
 Graham, R., . . . 4723
 6731, 11736, 15368
 Graham, R. J., . . . 12643
 Graham, S. A., . . . 10768, 15911
 Graham, S. H., . . . 2989
 Graham, V. E., . . . 12144
 Graham, W. E., . . . 1330
 Graham, W. R. Jr., . . . 14507
 Grainger, J., . . . 6512, 10358
 Gralén, N., . . . 1344
 Gram, C. N., . . . 14444
 Gram, C. N. J., . . . 2145
 Gram, K., . . . 3417
 Granaat, D., . . . 7643
 Granatowicz, J., 14470
 Grandjean, F., . . . 6355
 Grandpierre, R., . . . 5608, 12927
 Granfield, W., . . . 5198
 Granger, B., . . . 374
 Granger, W., 7049, 8354
 Granit, O., . . . 8832
 Granit, R., . . . 2204
 4015, 9458, 13055
 Grant, C. L., . . . 12587
 Grant, D. A., . . . 16670
 Grant, F. C., . . . 16941
 Grant, R. L., 3701, 3703
 Grant, T. J., . . . 3169, 10369
 Grass, A. M., 449, 12643
 Gratch, I., . . . 8701
 Grater, R. K., . . . 5207
 Gratia, A., . . . 835
 Gratz, L. O., . . . 777
 Grau, R., . . . 9736
 Graubard, M., . . . 12643
 Grauer, R. C., . . . 9120, 14383
 Gravelle, P. O., . . . 1668
 Grävenstein, H., . . . 671
 Graves, A. H., . . . 8934
 Graves, G. O., . . . 17035
 Graves, R. R., . . . 6002, 12549
 Graves, R. W., . . . 9600
 Gravesen, P. B., . . . 4455
 Gray, A. L., 8483, 10015
 Gray, D. E., . . . 10432
 Gray, E. H., 2043, 9206
 Gray, E. L., . . . 3740
 Gray, H., . . . 4290
 Gray, I., . . . 924
 2098, 8161
 Gray, I. E., . . . 662
 Gray, J., . . . 3602
 4044, 14744
 Gray, J. S., 7244, 7510
 9195, 11032, 12643
 Gray, L. A., . . . 12954, 14627
 Gray, L. H., . . . 5470
 Gray, P., . . . 8752
 Gray, P. H. H., . . . 1048, 13687
 Gray, R. E., . . . 3705
 7464, 12643
 Gray, S. W., 484, 12643
 Gray, W. D., . . . 11833
 Grayman, I., . . . 12643, 16494
 Greaney, F. J., . . . 3169, 12124
 Greathouse, G. A., . . . 4989, 15849
 Greaves, A. V., . . . 8223
 Greaves, C. D., . . . 5256
 Greaves, J. D., . . . 7497, 7498
 Greaves, J. E., . . . 8345
 Greaves, V. D., . . . 13263
 Grebenchikoff, O., 10159
 Greco, A., . . . 2527

- Greco, N. V. 6205
8249, 11644
18619, 18620
Greeley, P. O. 2026
12643, 12815, 16486
Green, A. A. 8117
Green, D. E. 16310
Green, D. F. 2146
Green, E. C. 13879
Green, E. L. 3169
5230, 15871
Green, H. D.
12643, 16390
Green, H. H. 1008
Green, J. 4614
Green, J. E. 5176
Green, L. F.
10856, 12109
Green, M. H. 16778
Green, M. L. 10134
11853A, 11872
Green, R. G. 35
6168, 11737, 11738
Green, W. 18030
Green, W. E. 1879
Greenberg, D. M. 3545
3632, 12824, 14440
Greenberg, L. 12144
Greenblatt, M. 16467
Greenblatt, R. B. 4504
15326, 17209
Greenburg, L. 5872
Greene, H. S. N. 4394
5809, 9369
9420, 13203
Greene, J. A.
12643, 14961
Greene, R. D. 2054
Greene, R. R. 382
3827, 7537, 9311
9312, 9643, 12643
12955, 14680, 15079
Greenfield, R. 5222
Greenfield, S. S. 1099
Greengard, H.
3828, 12643
Greenhill, J. P. 12121
Greenhut, W. H. 541
Greenleaf, D. G. 15583
Greenleaf, W. H. 3458
Greenlee, C. W. 15365
Greenman, J. M. 6406
Greenshields, F. 8950
Greenstein, J. P.
7266, 7284
Greenwald, I. 7251
Greenway, P. J. 4828
Greenwood, A. W. 2160
5341, 11055
Greenwood, W. O. 1662
Greep, R. O. 415
7966, 12643, 16587
Greer, C. M. 13178
Greer, P. H. 8177
8182, 9920, 11657
Gregsens, A. 11429
Gregsens, M. L. 3634
9148, 12643
Gregg, D. E. 485, 486
12643, 14760, 16390
Gregg, L. A. 15192
Grégoire, J. 12781
Gregoire, V. 11918
Gregory, F. G. 1188
6559, 7194
Gregory, G. B. 14108
Gregory, J. T. 18097
Gregory, P. H. 15447
Gregory, R. A. 7318
7706, 7707
Gregory, T. S. 836
Gregory, W. K. 3380
5163, 8865, 9737
Greig, K. A. 7586
Greig, M. E.
7408, 10982
Greiner, H. 847
Greis, H. 4735
Grell, K. G. 10524
Grenell, R. G. 8035
Grether, W. F. 14705
Greutter, J. E. 4489
Greval, S. D. S. 837
6053, 8126, 11567
Grevenstuck, A. 2303
Greville, G. D. 16301
Grewal, K. S. 7844
Gribble, L. R. 5152
Gridgeman, N. T. 16538
Griffen, A. B. 7990
Griffin, D. R. 5244
Griffin, F. P. 12727
Griffin, M. 5504
Griffin, R. A. 17594
Griffioen, K. 17738
Griffith, A. L.
10247, 13935
Griffith, A. S. 1014
6187, 11532
17297, 17298
Griffith, F. R. Jr. 9540
11225, 12643, 16413
Griffith, H. Q. 10859
Griffith, J. Q. Jr. 2269
2318, 7345
Griffith, W. H.
12777, 12817
Griffith, W. O. 426
Griffiths, A. E. 13914
Griffiths, M. 5898, 5899
Griffiths, W. J. 9644
Griggs, R. F. 8898
Grigor'eva, A. A. 9121
Grjns, G. 11025
Grilli, M. 16815
Grillo, H. V. S. 5013
Grimball, P. C. 5326
Grimes, F. G. 16286
Grimm, H. 5925, 5926
Grimm, J. 17016
Grimmer, R. V.
12643, 14747
Grinberg, K. 14175
Grindlay, J. H. 12643
13113, 13114
Grindley, G. C. 3434
Grinker, R. R.
450, 7088
Grinnell, J. 3428
3495, 16072
Gripwall, E. 2280, 4246
Griscorn, L. 9068
Griswold, C. L. 14128
Groat, R. A. 9710
Grob, A. 12049
Grobstein, C. 12956
Groebels, F. 1643
Groen, J. 5564
Groenewald, J. W. 8328
Groh, E. 4615
13603, 15416
Grollman, A. 3945
9535, 11054, 12643
Grolnick, M. 15141
Gromier, E. 18063
Gromling, L. G. 14797
Gromyko, E. P. 12185
Grönblad, E. 4197
Groner, M. G. 17739
Grøntved, J. 3519
Grönvall, J. S. 8833
Grosgrün, J. R. 5831
Gross, E. G.
12643, 14981
Gross, F.
3523, 7361, 7362
7363, 7364, 7365
Gross, H. 14761
Gross, L. 16836
Gross, P. 2656, 4556
7764, 9921, 13238
13537, 13540, 17251
Gross, P. M. 6682, 8630
Gross, S. T. 1331
Grossenbacher, K. A.
4919, 4939, 6597
Grossfeld, J.
2506, 12025
Grossman, A. 9334
Grossman, A. M.
10923, 11270
Grossman, E. B. 4069
Grossman, L. H. 2618
Grossman, R. 11723
Grossmann, H. 7861
Grosso, O. 9300
Grote, H. 5177
Groth, H. 1954
16071, 16073, 16101
Grout, A. J.
4748, 15478
Grove, A. R. 5271
Grove, L. C. 8498
Groves, A. E. 3169
Grow, M. H. 477
Guardet, F. 3325
Gruber, C. M. 525
7765, 13178
Gruber, C. M. Jr.
525, 13178
Gruhn, R. 7140
Grumbine, M. L. 12643
Grumbine, C. R. 4691
Grumbrecht, P. 3829
4276, 9279
11102, 16607
Grünberg, A. 6698
Grünberg, E. 16340
Grundfest, H. 12643
14718, 14720
Grüneberg, H. 1767
5342, 8945
8951, 14370
Grüner, G. 9833
Gruner, O. C. 2358
Grunkl, W. 10905
Grünstein, A. M. 2224
Grut, A. 14595
Gruzewski, Z. 16344
Grybowski, M. 3082
Grybowski, D. 3150
Guba, E. F. 3169, 6091
Gubner, R.
11189, 13115
Guchi, I. S. 8679
Gudden, F. 13936
Gudger, E. W. 15086
Gudkov, A. N. 13810
Gudkov, J. N. 13811
Gudlet, M. A. 3088A
Gueney, C. 12259
Guenther, G. 16311
Guérin, G. 16074
Guerra, P. 4641
Guerrant, N. B. 7401
9811A, 10998
11494, 17089
Guerrant, R. E. 9160
Guerrero, F. 8338
Guerry, D. 3rd.
7390, 12769
Guest, C. 2657, 4560
Guest, G. M.
2085, 16431
Guest, M. M. 12643
Guzg, W. 5879
Guggenheim, A. 8228
Guggenheim, K.
332, 333
Guggenheim, L. 15420
Guha, B. C. 10956
Guha, P. C. 6547
Gui, H. L. 5032
Guignot, F. 6874
Guilbert, H. R. 16506
Guild, B. T. 17145
Guillain, J. 13355
Guillamie, M. 17217
Guillaumin, A. 1128
4783, 8428
8434, 13768
Guillebaud, W. H. 4889
Guillemet, R.
15393, 15394
Guilliermond, A.
1364, 7094, 16151
Guilliermond, M. A.
1372
Guinier, O. 3499
Guinier, P.
15639, 17547
Guinochet, M. 1120
Guiraud, A. 13249
Guiraud, J. 3647
Guirchitch, G. de.
16075
Guiscasfré-Arrillaga, J.
1239
Guise, G. H. 14317
Guittart, J. 5605
Gulberg, G. 518
Gulhon, J. 15367
Gulick, A. 3444
Gulbring, A. 2543
Gullickson, T. W.
7077, 17082, 17083
Gülzow, M. 3753
Gumaer, P. W. 3151
Gummel, H. 4219
7834, 7851
Gumpert, M. 12476
Gunche, F. F. 13621
Gunde, B. G. 10291
Gundel, M. 838, 8293
Gundersen, A. 11919
Gundersen, T. 9474
Gundersen, H. 10461
Gunderson, M. F.
6131, 11304
Gunderson, N. O. 17332
Gundlach, R. H. 1947
Gunn, D. L. 3484
Gunn, F. D.
9926, 15197
Gunn, J. A. 11226
Gunn, J. W. C. 16662
Gunn, C. A. 4380
Guns, P. 4277
Gunter, G. 3331
Gunter, M. 13155
Guntermann, A. 14811
Güntert, H. 8809
Guntner, C. B. 11658
Gunther, C. E. M.
984, 17980
Günther, E. 1900
Günther, G. 2055
7259, 13200
14446, 17401
Günther, K. 12345A
Gunther, R. T. 19
Gupta, M. P. 12026
Gurd, M. R. 11226
Gurevitch, I. 17261
Gurin, S. 11056, 16080
Gurley, W. B. 2450
Gurney, R. 1614
Gustafson, A. F. 14317
Gustafson, C. B. 17601
Gustafson, F. G.
10800, 10301
Gustafson, W. A. 16841
Gustafsson, A.
3445, 12525
Gustavson, R. G. 11059
Gut, C. 4931, 15640
Gut, R. C. 15841
Gutberlet, C. 16236
Gutermuth, C. R. 16278
Guth, E. P. 1332
Guthrie, T. 4491, 7321
Guthrie, H. 13204
Guthke, A. J. 7685
Guthke, A. N. 11100
Guthrie, J. D.
1366, 12066
Gutierrez, M. E. 4872
Gutman, A. B. 1892
12957, 16455
Gutman, E. B.
1892, 12957
Guttman, R.
11147, 12643
Guy, H. G. 12234
Guy, R. A. 260
Guyénot, E. 5624
5625, 12499
Guyer, M. F.
3446, 4198
Guzman Barron, E. S.
1909
Gwan, O. S. 839, 840
Gwatkin, R.
11533, 12216
Gwynne, F. J. 7985
Gye, W. E. 4199
Gyger, M. K. 12404
Györfy, B. 70, 71
György, P. 5557, 16514
Györy, G. 4476, 7359
H
Haag, E. 11764
Haag, F. E. 2539
Haag, H. B. 554, 14144
Haag, J. R. 7406, 14543
Haagen, E. 2617
4589, 13560
Haas, A. R. C. 15595
Haas, E. 3557
Haas, G. 16076
Haas, H. T. A. 5759
9392, 13156, 14812
Haas, J. H. 138
328, 4177
9235, 10016
Haas, P. 6606
Haas, R. 841
4456, 6054, 9849
Haas, S. L. 9497
Haasis, F. A. 3169
14057, 17779
Haass, P. 4052, 16719
Haber, E. S. 2937
Haber, P. 9947, 13561
Haberland, H. F. O.
12885
Haberman, S. 1620
9979, 17456, 18003
Habs, H. 1787, 4562
Hac, L. R. 11659
Hachisuka, M. 1649
2650, 16077
Hackbart, W. 14386
Hackett, L. W. 3243
Hackmann, C. 4200
Hackney, J. C. 15837
Haddock, P. G. 2824
Haddon, C. B. 1481
Haddow, A. 582
584, 585
Haddow, W. R.
14041, 15803
Haden, R. L. 9682
Haddfield, G. 567
Haddidan, Z. 7910
7911, 12643, 13076
Hadjopoulos, L. G. 4563
Hadley, E. E. 5280
Hadley, F. B. 6244
Hadley, F. P. 2540
Hadley, J. M. 2227
Hadley, P. 2540
Hadley, P. B. 2768
Hadam, W. 11227
Hadorin, E. 1780
7156, 9784
Haefliger, E. 8356
Haefner, R. 16101
Haefen, F. E. v. 13969
Haempel, O. 5756
Haensel, A. 2505
Haenseler, C. M. 3169
6293, 12199
Haeringen, G. H. v.
4990
Haertl, E. J. 7117
Haesseler, P. v. 6212
Hafen, R. 13305
Hafner, F. 12314
Haga, T. 7095
Hagan, W. W. 5113
Hagedoorn, A. L. 8952
Hagedoorn, V. 8952
Hagedorn, H. C. 7346
Hagelstein, R. 11834
Hagemann, W. 250
Hagemueller, K. 6009
Hagen, H. 11478
Hagerup, O. 1169
12504, 12526, 14345
Haglund, G. E. 6407
Hagopian, F. 16834
Hagquist, C. W. 7604
Hahn, A. 12816
Hahn, A. J. 3079, 13681
Hahn, F. 4114, 16779
Hahn, G. G.
12145, 15887
Hahn, L. 4425
Hahn, P. F.
4247, 10991
Hahn, R. G. 9948
Haig, C. 11126, 12543
Haigh, J. C. 8462
Haider, E. 10017
11690, 15204
Haimovici, H.
13070, 14912
Hain, A. M. 3830
8831, 11057
Haines, R. B.
10043, 10044
Haines, R. W. 16955
Hairst, M. 7617
Hairst, R. E. 12643
Hajdu, I. 9814
Haji, C. S. G. 17236
Hajna, A. A.
9990, 17457
Hakimuddin, M. 10248
Halberstadt, S. 11616
Halbuth, W. 15817
Hald, J. 7289
Hald, P. M. 14482
Haldane, J. B. S. 1735
1746, 1788
1797, 16217
Haldi, J. 9193
10983, 12643
Hale, H. B. 2107
Haler, D. 4590
Haley, D. E.
1030, 17819
Haley, W. E. 12195
Hall, C. S. 1768
Hall, E. M.
13178, 14577
Hall, E. R.
5222, 7038, 11976
14310, 15596, 18107
Hall, F. 9604, 14913
Hall, G. E. 9518, 11046
Hall, G. J. 16930
Hall, G. O. 15115
Hall, H. T. B.
6120, 6224
Hall, J. M. 7312
Hall, K. 5630
11061, 11062
Hall, R. H. 5100
Hall, R. P. 7184
10525, 12281
Hall, S. R.
12643, 12958
Hall, T. D.
10189, 15546
Hall, T. F.
12588, 12595
Hall, T. F. Jr. 5368
Hall, V. E. 7244
Hall, W. K. 3763
Hallam, R. 9922
Hallaran, W. R. 9536
Hallan, L. 634

Hallenborg, T., ... 2487
 Haller, L., ... 18064
 Haller, M. H., ... 13880, 17628
 Haller, W., ... 5177
 Halliday, E. G., ... 4691
 Halliday, N., ... 9227, 12886
 Hallock, P., ... 13116
 Hallock, R., ... 11178
 Hallpike, C. S., ... 2205
 Halma, F. F., ... 15597
 Halpern, B. N., ... 7286
 Halpert, B., ... 2161
 Halpin, J. G., ... 11280, 13541
 Halpin, J. G., ... 3567, 3713
 Halstrom, F., ... 211
 Haltenhoff, R., ... 8319
 Halter, C. R., ... 5810
 Halversen, W. V., ... 6237
 Halverson, J. O., ... 12851, 16507
 Halvorson, H. O., ... 17463
 Hamai, I., ... 3706
 Hamann, C. B., ... 12435
 Hamann, E. E., ... 11739
 Hamant, C., ... 8391
 Hamazaki, Y., ... 38
 Hamblen, E. C., ... 5655
 Hamblen, E. C., ... 5855, 9645, 16609
 Hambleton, E. J., ... 12190, 12191
 Hambleton, E. J., ... 12192, 12377, 14116
 Hamburger, C., ... 3832
 Hamburger, F. Jr., ... 5626, 14644
 Hamburger, M., ... 14488
 Hamburger, M. Jr., ... 6152
 Hamburger, V., ... 15192
 Hamel, G., ... 13381, 13382, 13348
 Hamel, J., ... 11804
 Hamel, J., ... 41
 Hamer, W. J., ... 5435
 Hamerstrom, F. N. Jr., ... 5418, 10820, 12634
 Hamid, M. A., ... 13812
 Hamilton, B., ... 2044, 5857
 Hamilton, B. E., ... 502
 Hamilton, C. M., ... 17987
 Hamilton, O. L., ... 4115
 Hamilton, J., ... 17117
 Hamilton, J. B., ... 383
 Hamilton, J. B., ... 8792, 8814, 7542
 Hamilton, J. D., ... 12643, 14628, 16603
 Hamilton, J. D., ... 11172
 Hamilton, J. G., ... 8546
 Hamilton, J. G., ... 4116, 12643
 Hamilton, J. W., ... 458
 Hamilton, P., ... 11560
 Hamilton, P. M., ... 13427
 Hamilton, R. C., ... 1966
 Hamilton, S. W., ... 17098, 17099
 Hamilton, T., ... 109
 Hamilton, W. R., ... 10952
 Hamilton, W. R., ... 4060
 Hamilton, W. R., ... 4070, 4071
 Hamilton, W. J., ... 12643, 13122
 Hamilton, W. J., ... 5231
 Hamilton, W. J., ... 5230, 7038, 10821
 Hamilton, W. J., ... 14312, 14317, 18098
 Hamlett, G. W. D., ... 5689, 18099
 Hamlin, E., ... 9148
 Hammer, J. A., ... 13428
 Hammarfeld, S. O., ... 401
 Hammarsten, E., ... 5825, 7260
 Hammarsten, C., ... 10992
 Hammar, B. W., ... 1039
 Hammar, B. W., ... 2735, 2736, 2739
 Hammar, B. W., ... 6273, 6274, 8084
 Hammar, B. W., ... 8085, 11732, 17414
 Hammer, M., ... 5146
 Hammer, O. H., ... 8174, 12177
 Hammerling, J., ... 10103
 Hammerschmidt, J., ... 13429
 Hammersland, H. L., ... 11740
 Hammett, F. S., ... 2022, 2045
 Hammett, F. S., ... 2046, 2047, 3207
 Hammett, F. S., ... 9208, 9785, 10314
 Hammon, W. D., ... 6169
 Hammond, C., ... 11794
 Hammond, E. O., ... 9000
 Hammond, J., ... 2488, 10740

Hammond, J. C., ... 2507
 Hammond, W. S., ... 15061
 Hammoda, M., ... 8780
 Hamner, K. C., ... 4929, 15740
 Hamon, M., ... 12778
 Hamon, V., ... 11604
 Hamper, H., ... 574, 11282
 Hampton, S. F., ... 11561, 15142
 Hanache, J. E., ... 15395
 Hanau, J., ... 8635, 14505
 Hancock, N. L., ... 1189
 Handa, T., ... 8449
 Handler, B. J., ... 14761
 Handley, O., ... 13178
 Handley, W. R. C., ... 8226
 Handley, W. S., ... 7078
 Handovsky, H., ... 2083
 Handovsky, H., ... 12994, 16649
 Hanes, C. R., ... 10160
 Hanes, C. S., ... 10333
 Hanes, F. M., ... 586
 Hanes, W. J., ... 9646
 Haney, H. F., ... 9256
 Haney, H. F., ... 11041, 12643
 Hankins, O. G., ... 774, 17074
 Hanks, J. H., ... 4711, 9987
 Hanley, J. A., ... 4829
 Hann, H. N., ... 2008
 Hanna, G. D., ... 10558
 Hanna, W. F., ... 15448
 Hannum, C. A., ... 16128
 Hansen, A., ... 8118
 Hansen, A. B., ... 5832
 Hansen, A. E., ... 7347
 Hansen, A. E., ... 7486, 11264
 Hansen, C. H., ... 426
 Hansen, D., ... 11029
 Hansen, E., ... 17735
 Hansen, E. L., ... 11058
 Hansen, H. L., ... 17650
 Hansen, H. N., ... 17748, 17759
 Hansen, H. P., ... 7193
 Hansen, H. P., ... 9016, 12589
 Hansen, J. W., ... 14105, 14106
 Hansen, K., ... 518
 Hansen, K., ... 5548, 5760, 16780
 Hansen, K. M., ... 4117
 Hansen, L., ... 3856, 9928
 Hansen, L. P., ... 12992
 Hansen, O., ... 9138
 Hansen, O., ... 9495, 10965
 Hansen, O., ... 10966, 10967
 Hansen, W. W., ... 12602
 Hansen-Prüss, O. C., ... 6055
 Hanson, F. R., ... 8180
 Hanson, H., ... 5438, 5441
 Hanson, H. C., ... 7174
 Hanson, H. C., ... 12590, 12604
 Hanson, H. S., ... 15926
 Hanson, O., ... 635
 Hansen, P., ... 4278
 Hansen, S. V., ... 12794
 Hänsch, L., ... 842
 Hanum, S., ... 5856
 Hanut, C., ... 7348
 Hanut, C. J., ... 3636
 Hanut, C. J., ... 5833, 14506
 Hanzal, R. F., ... 9517
 Hanzlik, H., ... 11259
 Hanzlik, P. J., ... 4155, 13178
 Hao, K. S., ... 13937
 Happ, W. M., ... 16850
 Hapgood, F. C., ... 8226
 Hara, H., ... 6434, 13769
 Hara, T., ... 8622, 13013
 Haralamb, A., ... 3770
 Harboe, J. C., ... 18078
 Hard, W. L., ... 16162
 Hardell, R. E., ... 2737
 Harden, W. C., ... 544
 Hardenburg, E. V., ... 1190, 13813
 Harders-Steinhäuser, M., ... 12282
 Hardgrove, M., ... 11179
 Hardin, B. L. Jr., ... 622
 Hardin, G., ... 5102
 Harding, F. R., ... 12464
 Harding, J. P., ... 1848
 Harding, P. L., ... 13881, 17628
 Hardisty, P. E., ... 12071
 Hardman, Y., ... 2764
 Härdt, H., ... 4766
 Hardy, A. V., ... 8294, 17914
 Hardy, D. E., ... 12867

Hardy, J. D., ... 280
 Hardy, J. D., ... 281, 12643, 14525
 Hare, K., ... 11392, 12643
 Hare, R., ... 13430
 Harford, C. G., ... 884, 885, 15226
 Hargreaves, C. O., ... 15227, 15250, 15251
 Hargreaves, C. O., ... 514, 5761
 Haring, C. M., ... 15366
 Haring, F., ... 11478
 Haring, I. M., ... 4748, 4749
 Harington, C. R., ... 12491, 16138
 Harkavy, J., ... 6056
 Harkema, R., ... 12293
 Harlan, J. D., ... 15547
 Harley, C. P., ... 13882
 Harlow, H. F., ... 7618, 16671
 Harlow, W. M., ... 4954
 Harmer, P., ... 1240
 Harmon, G. E., ... 15298
 Harms, F., ... 15377
 Harms, H., ... 2303
 Harms, H., ... 2834, 8390
 Harmston, F. C., ... 10433, 12405
 Harne, O. G., ... 12643
 Harned, B. K., ... 526, 3807
 Harnisch, O., ... 10526, 16469
 Haroon Khan, M., ... 3184
 Harper, A. A., ... 9514
 Harper, C., ... 5982
 Harper, F. E., ... 985
 Harper, S. H., ... 6348
 Harper, W. F., ... 672
 Harpman, J. A., ... 708
 Harpman, J. A., ... 7960, 17086
 Harrar, J. G., ... 3189
 Harre, W., ... 11477
 Harrelson, R. T., ... 11347, 13275
 Harren, F., ... 16709
 Harreveld, A. v., ... 2245
 Harreveld, A. v., ... 5702, 7697
 Harriman, L. A., ... 11782
 Harrington, D. O., ... 7644
 Harrington, J. B., ... 10190
 Harrington, M., ... 10673
 Harris, A. H., ... 17146, 17299
 Harris, A. S., ... 12643
 Harris, A. W., ... 2267
 Harris, C. S., ... 3342
 Harris, E. E., ... 3103
 Harris, E., ... 4502
 Harris, H. A., ... 16559
 Harris, J. E., ... 3626, 6955
 Harris, J. S., ... 17252, 17253
 Harris, L. O. Jr., ... 5726
 Harris, L. H., ... 15143, 15144
 Harris, P. L., ... 3723
 Harris, P. N., ... 13178
 Harris, R. C., ... 7349
 Harris, R. G., ... 17815, 17819
 Harris, R. S., ... 16539
 Harris, S. A., ... 12841, 14563
 Harris, S. E., ... 9557
 Harris, T. M., ... 17481
 Harris, W. B., ... 15305
 Harris, W. H., ... 9850
 Harris, W. V., ... 4828
 Harrison, A., ... 4284
 Harrison, A. L., ... 3627
 Harrison, C. M., ... 11943
 Harrison, C. V., ... 17581, 17597, 17701
 Harrison, C. V., ... 7712, 7888
 Harrison, F., ... 5663
 Harrison, F., ... 7655, 7962
 Harrison, H. C., ... 12643
 Harrison, H. E., ... 7565
 Harrison, J. A., ... 4418
 Harrison, J. A., ... 11531
 Harrison, J. A., ... 15701, 17147
 Harrison, M. R., ... 8130
 Harrison, P. E., ... 2547
 Harrison, R. W., ... 2644, 4594
 Harrison, S. P., ... 12643
 Harrison, T. R., ... 4100, 9585
 Harrison-Smith, J. L., ... 9017
 Harrow, B., ... 13824
 Harshfield, G. S., ... 17892

Hart, E. B., ... 2691, 3567
 Hart, E. B., ... 3704, 7454, 7463
 Hart, E. B., ... 7468, 10911, 13178
 Hart, E. R., ... 13178
 Hart, G. H., ... 11103
 Hart, J. F., ... 16931
 Hart, J. L., ... 9062
 Hart, P. D., ... 14590
 Härtel, K., ... 6374
 Härtel, O., ... 12083
 Hartelius, V., ... 1397, 8588
 Harten, M., ... 15145
 Harten, L. L., ... 3169, 10321
 Hartig, R. D., ... 17651
 Harting, K., ... 15013
 Hartley, C., ... 3169
 Hartley, F., ... 14453
 Hartley, G. W., ... 9054
 Hartline, H. K., ... 12643, 16308
 Hartman, C. G., ... 202, 5232, 5626A
 Hartman, C. G., ... 9413, 11104, 12643
 Hartman, E., ... 6751
 Hartman, F. A., ... 9313, 12643
 Hartman, F. W., ... 21144
 Hartman, G., ... 11405
 Hartman, H., ... 6513
 Hartman, J. D., ... 13883
 Hartman, O., ... 1607
 Hartmann, A. F., ... 527
 Hartmann, F., ... 4890
 Hartmann, F. L., ... 17254
 Hartmann, G., ... 935, 936
 Hartmann, M., ... 1893
 Hartmann, M., ... 9547, 12027
 Hartmann, O., ... 17122, 17281
 Hartog, H. A. P., ... 7722
 Hartzell, S. E., ... 11726
 Hartsema, A. M., ... 10217
 Hartwell, R., ... 2802
 Hartwig, H., ... 4378
 Hartzell, A., ... 1501
 Hartzell, A., ... 10390, 11262
 Hartzell, A., ... 12194, 17887
 Harvey, A. M., ... 7684, 16712
 Harvey, E. B., ... 767
 Harvey, E. B., ... 13343, 16006
 Harvey, E. N., ... 1901, 5690, 7069
 Harvey, E. N., ... 10839, 12643, 16690
 Harvey, H. W., ... 12077
 Harvey, McG. A., ... 763
 Harvey, P. H., ... 12527
 Harvey, R. A., ... 16320
 Harvey, R. B., ... 15771
 Harvey, R. J., ... 15889
 Harvey, S. C., ... 200, 14532
 Harvill, E. K., ... 1225, 6711
 Harwood, L. W., ... 1241
 Harwood, P. D., ... 3253
 Harwood, P. D., ... 5095, 17279, 17898
 Hasama, B. I., ... 451, 7656
 Hasch, Z., ... 9314
 Hasché, E., ... 226
 Hasel, A. A., ... 1291
 Hasenbring, O., ... 16710
 Hashiguchi, M., ... 11641
 Hashimoto, E. I., ... 13802
 Hashimoto, S., ... 18157
 Hashimoto, T., ... 17148
 Haskell, R. J., ... 15890, 16189
 Hasken, W., ... 5147
 Haskin, H. H., ... 13005
 Haskin, C. P., ... 91, 1769
 Haskin, C. P., ... 3466, 7281, 8055
 Haskin, C. P., ... 8871, 12696, 15755
 Haskins, R. H., ... 17488
 Haslewood, G. A. D., ... 11022
 Hasley, D. E., ... 15279
 Haspekov, G. E., ... 16906
 Hass, G. M., ... 5428, 7437, 7438
 Hass, G. M., ... 7439, 9714, 16302
 Hassan, A., ... 12251
 Hassebrauk, K., ... 1463
 Hasselmann, C. M., ... 11636
 Hassenberger, R., ... 10249
 Hassib, M., ... 17629
 Hassin, G. B., ... 16908
 Hassko, A., ... 843
 Easterlik, R., ... 15089

Hastings, A. B., ... 2102
 Hastings, A. B., ... 7254, 10893
 Hastings, A. B., ... 14481, 16381
 Hastings, E. B., ... 17888
 Hastings, E. G., ... 6244, 8339, 9870
 Hastings, R. J., ... 11639, 11749, 11778
 Hastings, R. J., ... 15820
 Hasty, A. H., ... 13856
 Hatch, M. H., ... 8767, 8768, 12170
 Hatch, M. H., ... 12322, 12346, 12347
 Hatch, M. H., ... 14272, 16029, 17992
 Hatch, T., ... 15305
 Haterius, H. O., ... 3883, 12643
 Hatfield, D. M., ... 3496
 Hatfield, D. M., ... 10822, 14312, 18105
 Hathaway, I. L., ... 2168, 9315
 Hathaway, M. L., ... 10945
 Hatt, R. T., ... 5222
 Hatt, S., ... 13643
 Hatz, B., ... 4457
 Hauck, H. M., ... 11013
 Hauenstein, V., ... 7717
 Hauer, F., ... 9149
 Hauer, J., ... 6806, 14219
 Hauer, W., ... 12647
 Haugen, A. O., ... 14312
 Haupt, A. W., ... 5270
 Haupt, H., ... 4674
 Haurowitz, F., ... 9851
 Haury, V. G., ... 525
 Haury, V. G., ... 3798, 3799, 7765
 Haury, V. G., ... 7766, 9075, 12643
 Haus, M., ... 8884
 Hausberger, F. X., ... 9200, 14535
 Hauschild, H., ... 9585
 Hauschild, F., ... 7767
 Hauschild, R., ... 9788
 Hauser, C. R., ... 17324
 Hauser, I. J., ... 17149
 Hauser, J. S., ... 8648
 Hauser, M. J., ... 17149
 Hausrath, H., ... 1292
 Haus, W., ... 11180
 Haustein, E., ... 16170, 16171
 Haut, I. C., ... 13885, 15615
 Haves, L. J., ... 6567
 Havemann, R., ... 1910
 Haven, F. L., ... 12818
 Haver, F. E. Jr., ... 17786
 Havis, L., ... 1242
 Havis, L., ... 8500, 10167, 13884
 Hawbrecker, A. C., ... 18105
 Hawes, R. S., ... 12573
 Hawk, F. L., ... 7800
 Hawker, L. E., ... 4786, 15761
 Hawkes, C. D., ... 3728
 Hawkes, C. F. C., ... 17024
 Hawking, F., ... 2304
 Hawkins, J. A., ... 13542, 13543, 15960
 Hawkins, J. A., ... 11180
 Hawkins, J. E. Jr., ... 7663
 Hawkins, J. L. H. Jr., ... 13604
 Hawkins, R. S., ... 8463
 Hawkins, W. B., ... 11315, 16448
 Hawley, C. J., ... 15351
 Hawley, P. L., ... 806
 Haworth, W. N., ... 8594
 Hawthorn, L. R., ... 1251, 2990
 Hawver, K., ... 11095
 Hay, H. R., ... 13622
 Hay, R., ... 11977
 Hay, W. D., ... 15548
 Hayakawa, J., ... 16713
 Hayashi, F., ... 4657
 Hayashi, K., ... 844, 845
 Hayashi, T., ... 11316
 Haydak, M. H., ... 1532
 Hayden, C. C., ... 6005
 Hayden, C. C., ... 6478, 8089, 13360A
 Hayden, H. S., ... 12693, 14471
 Hayes, F. A., ... 8464
 Hayes, F. R., ... 7322
 Hayes, H. K., ... 5381, 16172
 Hayman, J. M. Jr., ... 2325
 Hayman, J. M. Jr., ... 5656, 18014
 Hayman, R. W., ... 5280
 Haynes, C. F., ... 11740
 Haynes, E., ... 2671
 Haynes, E. G., ... 16521
 Haynes, W. C., ... 15408
 Hays, E. E., ... 11059
 Hays, H. W., ... 5628

- Hayward, G. W., 14536
 Hayward, H. E., 1170, 15729
 Hayward, S. J., 5627, 16619
 Hazard, R., 13158
 Hazard, R., 14813, 14815
 Hazen, E. L., 2645
 Hazzard, A. S., 14410, 14418
 Head, J. R., 13309
 Headlee, T. J., 1526, 12224
 Headlee, W. H., 14176
 Headley, F. B., 2489
 Heard, R. D. H., 16610
 Heaslip, W. G., 4591, 4658
 Heath, O. V. S., 7194
 Heath, P., 10389, 15745
 Heathcote, R. St. A., 14816
 Heather, J. C., 9589
 Heatley, N. G., 5494, 7407
 Hebb, C. O., 16685
 Hebb, D. O., 3986
 Hebbel, R., 11178
 Heheler, F., 9432
 Heherer, G., 8020
 Hechler, M. O., 2541
 Hecht, M., 16801
 Hecht, M. S., 500, 501
 Hecht, R., 2542
 Hecht, S., 438
 Hecht, S., 439, 11127
 Hechter, O., 9334
 Heck, F. J., 7839
 Heck, G. E., 13943
 Heckel, G. P., 3955
 Heckel, G. P., 9316, 9317
 Hecker, R., 16855
 Heckh, G., 9739
 Heckscher, H., 7909
 Hector, J. M., 8876
 Heddergott, H., 2475
 Heden, K., 846
 Heden, K., 2543, 4458
 Hedenius, P., 14884
 Hedgekatti, R. M., 12559
 Hediger, E. M., 13178
 Hediger, H., 8069
 Heding, S. G., 5116
 Hedley, O. F., 5273, 16738
 Hédon, L., 14962
 Hedrick, J. O., 10117
 Hedström, H., 2672
 Hedwig, K., 3351
 Heeg, T. J., 8486
 Heere, W., 7929
 Heeres, P. A., 3747
 Heerswynghels, J. V., 5770
 Heffron, R., 13604A
 Hegarty, C. P., 6306
 Hegedüs, A., 847
 Hegendorfer, M., 8589
 Heggie, R., 5579
 Heggin, R., 15201
 Hegner, R., 943, 1553
 Hegner, R., 1554, 1578, 6732
 Hegsted, D. M., 8092, 17068
 Hehre, E., 9852, 9853
 Heiberg, H. H., 15642, 15643
 Heicken, K., 10045
 Heide-Jørgensen, H., 16856
 Heidelberg, M., 848, 8136
 Heider, K., 11009
 Heidermanns, C., 212, 12805
 Heifitz, A. J., 17140
 Heikinheimo, O., 15844
 Heilborn, O., 14346
 Heilbrunn, N., 7511
 Heilbrunn, L. V., 1902, 7252, 7543
 Heilman, F. R., 4503
 Heim, F., 5429, 5762
 Heim, F., 7768, 9548, 13159
 Heim, L., 8392
 Heiman, J., 16857
 Heiman, V., 4428, 16537
 Heimans, J., 1701
 Heimberger, W., 12887
 Heimsch, C. Jr., 17527
 Heinänen, N., 5589
 Heinbecker, P., 4016, 12643
 Heinemann, A., 4118
 Heinemann, M., 329
 Heindl, S., 5834
 Heinle, R. W., 9615
 Heinle, R. W., 9616, 13260
 Heinrich, C., 8792
 Heitz, T. W., 13387
 Heitzer, K., 5466
 Heizer, R. F., 8559
 Helander, A. B., 3429
 Held, E., 5625
 Helderweirt, G., 5763
 Helfer, J. R., 17993
 Helfer, R. G., 7141
 Helferrich, B., 12665, 14028
 Helff, O. M., 15077
 Hell, J. C., 3336
 Hellauer, H., 16640
 Hellbaum, A. A., 5613
 Hellebrandt, F. A., 8021, 11148, 12643
 Heller, C. G., 5628
 Heller, C. G., 5634, 9122, 12643
 Heller, E. J., 5628
 Heller, E. J., 9122, 12643
 Heller, H., 16611
 Heller, J., 12779
 Heller, J. E., 3690
 Heller, V. G., 2938
 Hellenga, A., 3020
 Hellings, C., 13938
 Hellings, C., 13985, 15645
 Hellman, L. M., 14681
 Hellman, M., 8865, 9737
 Hellmayr, C. E., 18065
 Hellmich, W., 6985, 8823
 Hellmich, W., 10635, 16059
 Hellström, H., 17401
 Helmbold, H. W., 7835
 Helmcke, J. G., 6819
 Helmer, O. M., 16002, 16003
 Helmer, O. M., 16002, 3946
 Helmer, O. M., 4245, 5486
 Helmer-Wullen, H. V., 9228, 13011
 Helms, S. T., 7350
 Helson, H., 9475
 Helsper, A., 11587
 Helweg-Larsen, P., 2380
 Helwig, F. C., 14762
 Hemmens, E. S., 6140
 Hemmelt-Halswick, A., 4875
 Hemmi, T., 14042
 Hemmings, A. W., 17274
 Hemmingsen, A. M., 2288, 2305, 4279
 Hempel, A., 12381
 Henbest, L. G., 7062
 Hench, P. S., 9604, 14913
 Henderson, E. W., 788, 6019
 Henderson, I. F., 10692
 Henderson, J. A., 15091
 Henderson, L. F., 17528
 Henderson, R. G., 15891
 Henderson, V. E., 2306, 14817
 Henderson, W. C., 14430
 Henderson, W. D., 10692
 Henderson, Y., 11045
 Hendrick, J., 15917
 Hendrick, V. A., 11970
 Hendricks, S. B., 17605, 17616
 Hendricks, W. A., 10747
 Hendrickson, G. O., 8879
 Hendrix, B. M., 290
 Hengstmann, H., 11009
 Henin, S., 13857
 Heninger, B. E., 5724
 Henkel, J. S., 11966
 Henle, G., 17232
 Henle, W., 17232
 Henlein, H., 11228
 Henneke, K. F. W., 17630
 Hennelly, T. J., 2304
 Henneman, J., 11631
 Hennemann, I. P., 17186
 Hennig, W., 6945
 Hennings, M. W., 8320
 Hennings, W. L., 9421
 Henninger, E., 4675
 Henningsen, E. J., 10038, 13448, 15417
 Henrich, A. T., 2764
 Henrich, A. T., 8357, 9854
 Henrich, A. T., 11795, 15271
 Henrich, H., 2476
 Henrich, M., 6549
 Henri-Martin, G., 16109
 Henry, A., 15367
 Henry, A. W., 1464
 Henry, B. S., 13707
 Henry, C. E., 11117
 Henry, C. L., 17098, 17099
 Henry, D. P., 6766
 Henry, H. E., 2227
 Henry, K. M., 5526
 Henry, K. M., 7453, 8066, 13359
 Henry, R., 2803
 Henry, R., 8393, 8394
 Henry, T. A., 10340
 Henschel, A. F., 11591
 Henschen, G. E., 197
 Henschke, U., 3568
 Hensel, F. K., 17187
 Hensel, R. L., 1191
 Henshaw, P. S., 5473
 Hensill, G. S., 10462
 Henson, E. R., 8464
 Henthorne, J. C., 4201
 Hentschel, E., 5390
 Henze, C., 5766
 Hepp, O., 7301
 Heppel, L. A., 3967, 14745
 Hepting, G. H., 12153
 Herbain, M., 14573
 Herber, E. C., 1592, 12252
 Herbert, F. K., 10906
 Herbst, C., 10725, 11441
 Herbst, H., 15708
 Herbst, J., 5983
 Herck, F., 15752
 Heresco, D., 14581
 Herford, G. V. B., 3779
 Herford, K., 3754
 Hering, F., 12479
 Hering, H. W., 5580
 Heritsch, F., 12242
 Herken, H., 7748, 11282
 Herlitz, C. W., 8295
 Herman, C. M., 6783
 Herman, J., 14904
 Herman, M., 9897
 Herman, N. B., 17157
 Hermann, F. J., 10161
 Hermann, G., 5457
 Hermann, H., 13160
 Hermann, H., 14721, 14818, 16414
 Hermann, M., 4120
 Hermann, S., 2307
 Hermann, S., 4119, 4120
 Hermann, W., 10191, 15280
 Hermoni, D., 2598, 2599
 Herold, K., 13522
 Herold, L., 3834
 Herrada, L. M., 15306
 Herrald, E. J. C., 14596
 Herrath, E. v., 15008
 Herre, A. W., 15474
 Herre, A. W. C. T., 8810
 Herre, H., 6408
 Herre, W., 5444
 Herre, W., 5980, 11421, 12432
 Herrell, W. E., 7587
 Herrick, C. J., 679
 Herrick, J. A., 4327, 7949
 Herrick, J. A., 15449
 Herrick, J. F., 362
 Herrick, J. F., 487, 7711, 9400
 Herrick, J. F., 12643, 13113, 13114
 Herrin, H. S., 11740
 Herrin, R. C., 365
 Herrin, R. C., 7566, 12643
 Herrington, B. L., 8080, 8081, 8083
 Herrington, L. P., 986
 Herrington, L. P., 985, 3670
 Herrington, L. P., 6209, 16740
 Herrlich, H. C., 12643, 12974
 Herrmann, C. L., 7435
 Herrmann, G., 13117
 Herrmann, W., 8263
 Herrold, R. M., 187
 Herrold, R. D., 15193
 Hersh, A. H., 1770
 Hershey, A. D., 6307, 13641
 Hershey, A. L., 4795
 Hertel, K. L., 7323
 Hertel, K. L., 14694
 Hertig, M., 1516
 Hertling, L. G., 10558
 Hertwig, C., 15062
 Hertz, D., 3434
 Hertz, M., 4891
 Hertz, R., 5631
 Hertz, S., 5853
 Hertzman, A. B., 12643
 Hertzog, L., 6836
 Hervé, L., 14328
 Hervé, L., 14093
 Herwick, R. P., 7769, 7782
 Herzberg, K., 4592
 Herzog, A., 13562, 13563
 Herzog, E., 12568
 Herzog, R., 11287
 Herzog, R., 1100
 Heske, F., 13939
 Hesler, L. R., 15463
 Heslop, T. S., 2099, 16976
 Hess, A. D., 16279
 Hess, G., 8835
 Hess, W. C., 9123
 Hesse, C. O., 11977A
 Hesse, C. O., 13890, 14079
 Hesse, G., 15687
 Hesse, H., 3603
 Hesse, R., 5, 72
 Hesser, F. H., 456, 12643
 Hesser, S., 5590
 Hessler, L. E., 1185, 13814
 Hester, H. R., 14498, 15368
 Hester, J. B., 1352
 Hester, J. B., 10216, 13858
 Hester, J. B., 14072, 15730
 Heston, W. E., 1771
 Hetherington, A., 12643
 Hetherington, A. W., 14963
 Hetherington, D. C., 17049
 Hett, J., 4317
 Hettiche, H. O., 987, 11796
 Heuber, W., 12888
 Heuberger, J. W., 3169, 10378
 Heubner, W., 1910
 Heuer, G. J., 9318, 16781
 Heuer, G. J., 7730
 Heugerbauer, H. F., 8504
 Heuser, G. F., 17110
 Heusner, A., 16594
 Hevesy, G., 4425, 7685
 Hevesy, G. C., 5958
 Hewatson, F. N., 2391
 Hewitt, A. C. T., 17084
 Hewitt, J. L., 17833
 Hewitt, L. F., 17150
 Hewitt, R., 1555, 6734
 Hewitt, R., 10491, 10492, 17899
 Hewitt, W. B., 1482
 Hewitt, W. B., 3169, 10343
 Hewitt, W. B., 12146, 14055
 Hewitt, W. C., 15520
 Hewston, E. M., 9219
 Hexner, H., 15709
 Hey, G. B., 1811, 15549
 Heymann, G., 14962
 Heymann, W., 7491
 Heymans, C., 9519
 Heyn, A. N. J., 15731
 Heyningen, W. E. v., 1940
 Heyns, K., 12842
 Heywang, B. W., 4426
 Heyward, F., 7195
 Heyward, F., 10250, 15646
 Hiatt, E. P., 12643
 Hiatt, N., 9855
 Hibbard, C. W., 14311
 Hick, F. K., 12643
 Hickey, J. H., 11257
 Hickey, J. J., 7006
 Hicking, C. F., 148
 Hicking, C. F., 1849, 12625
 Hickman, C. J., 1472, 1478
 Hickman, K. C. D., 3740
 Hickman, M. E., 10810
 Hickmans, E. M., 2343
 Hicock, H. W., 3021
 Hide, J. C., 15550
 Hiesey, W. M., 5266
 Higbee, H. W., 1217
 Higginbotham, A. C., 3497
 Higginbottom, C., 288
 Higgins, G. M., 3755, 3835
 Higgins, G. M., 3840, 8843, 9361
 Higgins, G. M., 9619, 9693, 15062
 Highman, W. J. Jr., 5857
 Hilbert, K. F., 6121
 Hildebrand, A. A., 1489
 Hildebrand, E., 11288
 Hildebrand, E., 11291, 18211
 Hildebrand, E. M., 3189, 6308, 6640
 Hildebrand, E. M., 10359, 14094, 15889
 Hildebrand, S. C., 17581
 Hildebrand, S. F., 1637, 16051
 Hildén, K., 9740
 Hilditch, T. P., 803
 Hilditch, T. P., 10291, 10292, 10986
 Hilgard, E. R., 7244
 Hilgeman, R. H., 1243
 Hilgenberg, H., 236
 Hilgendorff, G., 10378
 Hill, A. H., 8022
 Hill, C. J., 9439
 Hill, D. C., 17593
 Hill, F. C., 350
 Hill, H., 17803
 Hill, H. R., 5151
 Hill, J. B., 92
 Hill, J. E., 5233
 Hill, L. M., 1448, 6669
 Hill, M., 10907
 Hill, R. T., 609
 Hill, S. E., 1365, 1392, 1398
 Hill, S. E., 3077, 3095A, 12643
 Hill, S. O., 3175
 Hill, T. J., 4459, 6606
 Hill, W. C., 14213, 17945
 Hill, W. C. O., 5948, 7044
 Hill, W. C. O., 7045, 8023
 Hill, W. L., 4862
 Hill, W. T., 11229
 Hillary, B. B., 16152
 Hildrup, D. G., 15307
 Hilles, C., 4564
 Hille, C., 9935, 11606, 17275
 Hills, R. G., 488
 Hilmers, G., 16487
 Hilston, N. W., 11494
 Hiltmann, R., 14028
 Hilton, N. W., 8229
 Hilton, S. A., 8465
 Himmelmann, W., 440
 Himmelsbach, C. K., 3604, 13178
 Himmelweit, F., 4593
 Himsforth, H. P., 489
 Himwich, H. E., 655, 2028, 7409
 Himwich, H. E., 7910, 7911, 9486
 Himwich, H. E., 12643, 13076, 14664
 Hinchey, V. M., 12569
 Hindmarsh, W. L., 2697
 Hindwood, K. A., 7007
 Hindwood, K. A., 10641, 18066
 Hine, C. H., 13178
 Hine, M. K., 8230
 Hiner, R. L., 17074
 Hines, H. M., 12868
 Hines, M. K., 960
 Hinman, E. H., 3244
 Hines, F., 5860
 Hinsberg, K., 3657
 Hinsberg, K., 9319, 9549, 11065
 Hinsley, J. C., 7244
 Hinsley, J. C., 11392, 12643
 Hinshaw, W. R., 6735, 15964
 Hinsley, J. C., 452
 Hippe, L., 2678
 Hirai, T., 1420, 4964
 Hirano, M., 8154
 Hirano, S., 528
 Hirata, K., 9487
 Hiratsuka, G., 13015, 13161
 Hiroki, H., 988
 Hirsch, E. F., 12819
 Hirsch, H., 14929
 Hirschberg, N., 6188, 13255
 Hirschey, W. C., 17408
 Hirschfeld, C. H., 680
 Hirschmann, H., 2122
 Hirsch, J., 8296
 Hirst, G. K., 6057
 Hirt, A., 4351
 Hirt, R. E., 12120, 14043
 Hisamura, H., 16345, 16346
 Hisaw, F. L., 415, 7966
 Hisaw, L., 11405
 Hiscox, E. R., 4418
 Hitchcock, A. E., 1362
 Hitchcock, A. E., 1411, 6579, 13990
 Hitchcock, A. E., 17682, 17683, 17688
 Hitchcock, C. L., 10135, 13758
 Hitchcock, D. L., 5430
 Hitchcock, F. A., 12643

- Hitchcock, H. B., 11450, 16058
 Hitchens, A. P., 18702
 Hitchings, G. H., 5519, 16515, 16527
 Hite, K. E., 6058, 17151
 Hitz, C. W., 11977A, 13885
 Hixon, R. M., 11944
 Hixson, E., 1630
 Hyeda, K., 9924
 Hjärre, A., 8297, 17384
 Hjelmqvist, H., 12528
 Hjort, A. M., 273, 4108, 4109
 4121, 9550, 11214
 Hjort, J., 1861
 Hoadley, L., 747
 Hoagland, C. L., 9124
 Hoagland, D. R., 6560, 15748
 Hoagland, H., 5693
 7910, 7911
 12648, 13076
 Hoar, W. S., 17039
 Hoare, C. A., 8692, 8718
 Hoare, E. D., 4565, 9991
 Hobart, F. G., 4122
 Hobart, G., 12643, 16690
 Höber, J., 9079
 Höber, R., 9079
 9265, 11090, 12643
 Hobmaier, M., 6736, 12253
 Hoch, J. H., 1333
 Hochman, A., 9390
 Hock, A., 5984, 11512
 Hock, C. W., 15703
 Hockenyoys, G. L., 10463
 Hocker, U., 5985
 Hodapp, E. L., 2164
 Hodes, B. R., 4472
 Hodes, H. L., 7588
 13659, 17255
 Hodes, R., 9488
 12643, 16641
 Hodge, C. 4th., 9786
 Hodge, H. C., 9136
 9170, 15035
 Hodge, W. E., 12004
 Hodges, H. C., 4850, 5594
 Hodgkin, A. L., 4017
 11137, 12643
 Hodgkin, E. P., 5094, 6752
 Hodgkiss, W. S., 3212
 Hodgman, M. E., 5381
 Hodgson, C. W., 1204, 11943
 Hodgson, R. W., 1244
 1747, 18886, 15598
 Hodson, A. C., 15927
 Hodson, W. E. H., 12193
 Hoed, D. den., 10860
 Hoekstra, R. A., 5505
 Hoelzel, F., 7589
 Hoepke, H., 1967
 Hoeppli, K., 8171
 8689, 12250
 Hoerl, R. A., 17489
 Hoerner, G., 5718
 Hofer, E., 7302
 Hoff, E., 9885
 Hoff, M. C., 9760
 Hoff, F., 529
 Hoff, H., 15961
 Hoff, H. E., 405, 506, 4072
 4073, 7790, 11191
 12643, 13133, 16807
 Hoffer, G. N., 6561
 Hoff-Jørgensen, E., 7285
 Hoffund, S., 2698
 Hoffman, A. C., 441
 Hoffman, A. M., 16759
 Hoffman, G. R., 10944, 12669, 16553
 Hoffman, I. C., 1245, 2992
 Hoffman, M. M., 3719, 7982
 Hoffman, R. S., 15075
 Hoffman, S., 2674
 Hoffman, W. S., 14977
 Hoffmann, E., 1669
 Hoffmann, G., 9787
 Hoffmann, H., 5117
 Hoffmann, K., 16629
 Hoffmann, O., 12080
 Hoffmann, P., 7657
 Hoffmann, W. A., 14192
 Hoffmann-Grobéty, A., 16258
 Hoffmeister, W., 2000
 Hofmann, A., 8534
 Hofmann, C., 5049
 10606, 14129
 Hofmann, K., 3903
 9363, 14454
 Hofmann, R., 7063
 Hofmeier, K., 849
 Hoffmeister, K. T., 14285
 Hofmeyr, J. D. J., 5315, 10728
 Hogan, A. G., 9160
 Hogarth, J. C., 11588
 Hogben, L., 3957
 Högberg, B., 13266
 Hoge, J., 5927
 Hoge, W. G., 6237
 Högger, D., 15228
 Högglund, H., 1862
 Hogness, T. R., 1951
 7267, 12742, 16348
 Hogreve, F., 11479
 Hogue, M. J., 17400
 Hohenadel, B., 4178
 Hohl, L., 1025
 Hohlweg, W., 3844, 9320
 Hohn, J., 15281, 15282
 Holben, F. J., 15571
 Holbrook, P., 9604
 Holbrook, W. P., 14913
 Holck, H. G. O., 13178
 Holcomb, R., 15120
 Holden, F. R., 5873
 Holden, H. F., 521
 3569, 14578
 Holder, H. G., 11230
 Holder, R. C., 17097
 Holdrin, H., 2427
 Holford, F. D., 17413
 Holford, F. E., 2596
 Hollander, A., 10010
 10018, 16168
 Hollander, A., 8112
 8118, 11528
 11529, 11530
 Hollander, F., 2100, 8231
 Hollander, W. F., 12545, 16678
 Hollenberg, G. J., 6328
 Hollering, H., 3587
 Hollingsworth, H. L., 9440
 Hollinshead, M. H., 4754
 Hollmann, H. E., 12702
 Hollmann, S., 14742
 Holloper, C. A., 11965
 Holloway, J. E., 13784
 Holloway, J. K., 10449
 Hollowell, E. A., 2939, 13999
 Holly, M., 10592, 17964
 Holly, O. M., 9367
 Holm, E., 3472, 14437
 Holm, G. E., 9817
 Holm, J., 2380
 Holm, S., 9459
 Holman, E., 14885
 Holmberg, C. G., 9150
 Holmberg, T., 2204
 Holmdahl, D. E., 17040
 Holmes, A. D., 830
 5569, 11510
 Holmes, C. E., 3713
 Holmes, E., 7663
 Holmes, F. O., 5316, 10360
 Holmes, H. N., 5553
 Holmes, J. E., 12643
 Holmes, N. E., 10221
 Holmes, S. J., 6210
 Holmgren, H., 7462
 Holmgren, L., 12899
 Holmström, A., 3069
 Holroyd, F. J., 17152
 Holst, E., 2225, 11149
 Holst, S., 12959
 Holst, O., 1789
 Holt, H., 16500
 Holt, J. P., 12643, 16784
 Holt, L. E. Jr., 3728
 Holten, C., 1968, 3947
 Holman, D. F., 11534
 11595, 17178
 Holtz, F., 16714
 Holway, A. H., 2198, 7629
 Holwerda, K., 16612
 Holz, K., 4605
 Holzappel, M., 10769
 Holzschner, E., 703
 Holzman, B., 16248
 Homolle, A. M., 1129, 11885
 Homonnay, N., 18067
 Hong, C. J., 12643
 Honing, J. A., 5317, 5318
 5317, 5318
 Honma, S., 8154
 Honzik, C. H., 9441
 Hood, M., 6737
 Hoof, C., 3637
 Hooghiemster, E., 13600
 Hooker, C. W., 656
 11114, 14629
 Hooker, H. D. Jr., 10220
 Hooker, S. B., 2519, 9834
 Hoon, R. C., 10207, 11969
 1207, 7046
 Hooper, E. T., 14312, 18105
 Hooper, F. E., 11765
 Hoover, E. E., 10807
 Hoover, M. E., 93, 7138
 Hoover, R. F., 4763, 6386
 Hoover, S. R., 17420
 Hope, E. C., 8982
 Hopkins, D. L., 3261
 Hopkins, F. G. 2nd., 1883
 Hopkins, J. W., 108
 8466, 12070
 Hopp, J., 12799
 Hopper, S. H., 13703
 Hopperstead, S. L., 3169
 Hopping, R., 17994
 Hopwood, A. T., 10683
 Horack, H. M., 11536
 Horacker, B. L., 7267
 Horejsi, J., 1989
 8756, 12890
 Horikawa, Y., 3505
 Høring, F. O., 8198
 Høring, H., 11637
 Hormay, A. L., 12598
 Horn, B., 9856
 Horn, K., 8395
 Hornbostel, W., 10354, 15450
 Horner, C. K., 17426
 Horner, I., 17238
 Hornbrook, J. W., 8232
 Horning, B. G., 8299
 Hornitschek, H., 5980
 5986, 11480
 Horowitz, L. J., 8299
 Horowitz, N. H., 7065
 Horsfall, F. Jr., 15783
 Horsfall, F. L. Jr., 1994, 9948, 18431
 Horsfall, J. G., 3152
 3169, 5002, 6685
 8627, 10373, 14093
 Horst, E., 2741
 Hørestadius, S., 9788
 Horstmann, H., 4676
 Horton, B. T., 4089, 12643
 Horton, H. A., 17582
 Horton, I. H., 7142
 Horton, N. S., 7064
 Horton, R., 16897
 Horton, R. G., 12643
 Horvath, S. M., 3629
 Horwitz, M. K., 14544
 Horwitz, M. T., 9688
 Hosaka, E. Y., 15490
 Hosaka, I., 13506
 Hosie, R. C., 4796
 Hoskins, J. H., 3435
 Hoskins, R. G., 16613
 Hoskins, W. H., 14964
 Hoskins, W. M., 3176
 3213, 10460
 10471, 10473
 Hoskwith, B., 2618
 Hosny, M., 3344
 Høsslin, R. v., 1034
 Hostetter, E. H., 16507
 Hostetter, D. R., 7088
 Hostie, P., 7008
 Ho-Ts-Khanh, 16898
 Hotovy, R., 15014, 16735
 Hotta, T., 6409
 Hon, H. C., 12792, 16920
 Houchin, O. B., 14507
 14630, 14634
 Høngen, V. H., 12601
 Høngst, J., 3683
 Hough, W. S., 3177, 12173
 Houghland, G. V. C., 10185
 Houghton, F. C., 16236
 Houghton, H. G., 16237
 Houldsworth, E., 10096
 Houssay, B. A., 2142
 3836, 3837
 Houston, B. R., 1482, 3169
 Hovasse, R., 7116
 Hove, E., 7454
 Howe, V., 3572
 How, A. E., 17153
 Howard, A., 3010, 11945
 Howard, C. P., 636
 Howard, E., 12643, 15019
 3169
 Howard, H., 5207, 8836
 Howard, H. W., 8570
 Howard, M. Jr., 1223
 Howard, M. E., 6162
 Howard, R. P., 14978
 Howat, G. R., 13362
 Howe, E. W., 5041
 Howe, H. A., 15217
 15229, 15230
 Howe, J. S., 9965, 14914
 Howe, P. E., 2485
 Howell, A. H., 18100
 Howell, B. F., 5083
 Howell, C. D., 11128
 Howell, J. L., 16505
 Howell, J. T., 4797, 4797A, 4797B
 6377, 6410, 6411
 6412, 10136, 11852
 Howell, J. W., 1839
 Howell, K. M., 9383
 Howell, S. C., 13432
 Howell, S. F., 10908, 16347
 Howells, W. W., 2456
 Howes, F. N., 10464
 Howes, N. H., 3806
 3838, 9042, 12923
 Howitt, B., 13564
 Howitt, B. F., 948
 Howlett, F. S., 2993, 6514
 Hoy, E. A., 16498
 Hoy, H. E., 8501
 Hoyle, W. L., 1517
 Hoynes, A. L., 15308
 Hoyt, A., 2765
 Hoyt, J. C., 5369
 Hoyt, R. E., 9925, 11593
 Hrdlička, A., 2457
 9741, 11436
 Hrubesch, A., 13019
 Hruby, K., 16153
 Hsiao, S. C. T., 6822, 10559
 Hsiao, T. Y., 14109
 Hsiao-Hui, C., 748
 Hsieh, W. M., 9392
 11078, 11079
 Hsien-Po, T., 5319
 Hsü, H. F., 8693
 17932, 17933
 Hu, H. H., 6
 Hu, S. M. K., 8694
 Huang, C. H., 17347
 Huang, C. S., 7567
 Huang, J. J., 7658
 11077, 13009
 Huang, S. F., 12792
 Hubbard, S. S., 2023
 Hubbard, A. W., 471
 Hubbard, D. H., 18105
 Hubbard, D. M., 1915, 1923
 Hubbard, E. H., 6503
 Hubbard, R., 7511
 Hubbard, R. S., 12718, 17335
 Hubbard, W. E., 1617, 17981
 Hubbell, T. H., 1822
 Hubbs, C. L., 6956, 6957, 10625
 10626, 12421, 14411
 Huber, G. A., 8637, 10374, 15860
 17749, 17780, 17834
 Huber, H. L., 17154
 Huber, J., 16101
 Huber, K., 12047
 Huber, L. L., 8644
 Huber-Pestalozzi, G., 10104
 Hubert, B., 1357
 1405, 1408
 Hubert, G., 383
 Hubert, G. R., 12643
 Hübner, H., 2101
 Hübner, O., 13205
 Hübner, L., 4776
 Huckabee, J. W. Jr., 2974
 Hückel, R., 13405
 Hucker, G. J., 15408
 Huddle, H. B., 4905
 Huddleson, I. E., 6124
 Huddleson, I. F., 11739
 13261, 17300
 Huddleston, O. L., 12643
 Hudoffsky, B., 16414
 Hudson, C. B., 786
 Hudson, H. G., 15551
 Hudson, J. E., 209
 Hudson, N. P., 11531
 13449, 15222
 Hudson, V., 11684, 11685
 Huelin, F. E., 17694
 Huene, F. V., 10634
 Hueper, W. C., 9520
 Huertis, R. W., 18101
 Huey, L. M., 1654
 18102, 18103, 18104
 Huff, C. G., 18899
 10493, 17901
 Huffman, C. F., 248
 Huffman, L. D., 11087
 Hufnagel, L., 15647, 15648
 Huggins, C., 11385, 12643
 Hughes, A. E., 15789
 Hughes, B., 2177
 Hughes, E. C., 12719
 Hughes, E. H., 319
 3707, 11010
 Hughes, H. B., 7802
 Hughes, J., 12643
 16368, 16949
 Hughes, T. P., 4507
 Hughes, W. H., 9966
 Hughes, P., 1756
 Huhn, O., 12732
 Hule, G. B., 15326
 Hukuhara, T., 4074, 4075
 Hull, C. L., 7088, 9442
 Hull, F. E., 8949
 Hull, F. M., 3373
 Hull, J. B., 12217, 12218
 Hulme, A. C., 10222
 10330, 12095
 Hülphers, G., 5091
 Hulpoi, N., 6294
 Hulten, M., 7009
 Hultquist, G. T., 14763
 Humbert, H., 10137
 Hume, C. W., 14433
 Hume, E. M., 20
 Hume, E. M., 7440
 Hume, J. F., 4076
 Humes, A. G., 6716, 12290
 Humfeld, H., 10224
 Hummel, F. C., 11265, 14494
 Hummel, K., 12570
 Hummel, K. P., 4392
 Hummel, L. E., 7871
 Hummerlinck, P. W., 8725
 Humphrey, A. A., 12613
 Humphrey, H. B., 1203
 Humphrey, R. R., 749
 11451, 13333
 Humphrey, T., 9676, 15011
 Humphreys, L. G., 14695
 Humphreys, S. P., 7996
 Humphries, C. F., 9043
 Hundertmark, A., 3937
 Hundhausen, G., 7967
 9223, 14939
 14940, 14951
 Hungate, R. E., 7185
 Hungerford, H. B., 16025, 16035, 16036
 Hunnewell, F. W., 11905
 Hunscher, H. A., 11263
 Hunshaw, H. C., 15189
 Hunt, A. M., 530
 Hunt, C. H., 15116
 Hunt, G. M., 5050
 Hunt, H. B., 12921, 13256
 Hunt, H. F., 7597
 Hunt, J. D., 12643
 Hunt, L. W., 949
 Hunt, M., 5764, 7770
 Hunt, R., 21
 Hunt, W. A., 7621
 Hunt, W. H., 4123
 Hunter, A., 5487

- Hunter, F. R., 1887
 2255, 2544
 Hunter, G. W. 3rd., 1556
 Hunter, R. P., 10821
 Hunter, W. P., 5071
 Hunter, W. S., 1556
 Huntsman, A. G., 158
 3530, 12626
 Hurd-Karrer, A. M.,
 1409, 13974
 Hurevita, H. M., 481
 Hurlbut, H. S., 1621
 Hurn, M., 12643
 Hursh, J. B., 12643
 13077, 18078
 Hurst, C. T.,
 1579, 10539
 Hurst, E. W., 15078
 Hurst, L. A., 13815
 Hurst, R. H.,
 1433, 1465
 Hurst, W., 3605
 Hursthouse, E. W.,
 18068
 Hurt, R. H., 3169
 Hürthle, K., 13118
 Husband, H. W., 6075
 Husiatinschi, A., 1618
 Hussain, M. T., 10251
 Husson, R., 17968
 Hustache, A., 5132
 6875, 8769, 12348
 Husted, L., 1702, 8916
 Hutchings, B. L., 17474
 Hutchins, A. E., 12529
 Hutchins, L. M.,
 3121, 3169
 Hutchinson, G. E., 7223
 Hutchinson, J. B., 73
 Hutchinson, J. H., 7818
 Hutchinson, J. J., 7683
 Hutchinson, R. O., 9168
 Hutchison, A., 8119
 Hutton, R., 8638
 Hutt, F. B.,
 789, 1772, 2508
 3787, 8093, 15117
 Hutter, H., 9563
 Hutton, E. L., 6153
 13549, 14190, 15178
 Huuskonen, A. J., 1789
 Huxley, J. S., 14340
 Huxley, J. S., 1693
 Huzioka, Y., 4969
 Huziware, Z., 5859
 Hwang, J. M. S., 2429
 Hwang, L., 12110
 Hwang, Y., 6309
 8346, 8347, 8535
 Hyde, H. van Z.,
 3694, 3739
 Hyde, M. B., 1840, 2790
 Hyde, R. B., 581
 4196, 15146
 Hygen, G., 8378
 Hyland, H. H., 7827
 Hyland, H. L., 6458
 Hyland, M. C., 1466
 Hyman, C., 10885
 10886, 12643
 Hyman, L. H.,
 5101, 8726, 8731
 8732, 10540, 10541
 14207, 17934, 17935
 Hyman, S., 6039
 Hynes, K., 12643
 Hynes, H. J., 14080
 Hyslop, J. A., 1486
- I
 Iacapraro, G.,
 4202, 9587
 Iacapraro, R., 4202
 Iapalucci, L., 4226
 Iball, J., 16358
 Ido, T., 9257
 Iglauser, A., 2115
 Iglesias, R., 14892
 Iizuka, A., 4460, 4460A
 Ijjász, E., 6531
 Ikechi, S., 3223
 Ikeda, G., 13016
 Ikeda, S., 3220
 Ikeda, Y., 10350
 Ikegaki, I., 16560
 Iken, E. W., 5526
 Ikenberry, G. J., 15649
 Ikeya, J., 14042
 Ikin, E. W., 7400, 15169
 Ilavsky, J., 17465
 Ilien, G., 6413
 Ilin, M. M., 1157
 Iltch, D., 8120
 Ilin, N. A., 5765
- Ilin, W. S., 8566
 Illényi, A., 2545
 4461, 4705, 4718
 Illig, R., 1929
 Illingworth, G. F. W.,
 16551
 Ilvessalo, Y., 15650
 Imai, T., 673
 Imai, Y., 74
 Imaizumi, M.,
 4524, 13713
 Imle, E. P., 12194
 Imler, L., 6342, 6343
 Immelman, M. N. S.,
 7086
 Immer, F. R., 7171
 Imms, A. D.,
 10577, 17256
 Imura, J., 4991
 Imus, H. A., 9476
 Ingalls, J. K., 16379
 Ingalls, T. H., 416
 11339, 16921
 Ingels, A. E., 10436
 Ingersoll, R. L., 17257
 Ingham, D. W., 9776
 Ingle, D. J., 3755
 3835, 3839, 3840
 3841, 3842, 3843
 5629, 9321, 9693
 9694, 12643, 13089
 Ingles, L. G.,
 5178, 14312
 Ingraham, R. C., 5591
 7544, 12643
 Ingram, J. W., 12195
 Ingram, M.,
 10046, 15396
 Ingram, W. M., 10793
 Ingram, W. R.,
 7088, 11391, 12643
 14965, 14981, 16614
 Ingram, W. T., 15309
 Ingrassia, G., 11537
 Inhoffen, H. H.,
 3844, 9320
 Inman, O. L.,
 4932, 14007
 Innes, J. R., 10019
 Inoue, T., 17407
 Inoue, Y., 15850
 Inouye, K., 3573, 3574
 Inouye, R., 3221
 Insko, W. M. Jr.,
 6016, 6017
 Intontji, R., 1687A
 Iob, V., 2048
 Ionescu, C. D., 3508
 Ionescu, M. A., 14280
 Ionescubărlad, C. D.,
 15514
 Irányi, E., 10861
 Ireland, F., 3042
 Ireland, J. C., 11000
 Ireland, J. C.,
 4933, 15772
 Iremak, S., 937
 Iri, S., 12666
 Irish, C. W., 16821
 Irish, O. J., 12803
 Iriyama, K., 15252
 Irwin, J. L., 4046, 12643
 Irvine, R., 14902
 Irvine, V. C., 10302
 Irving, J. T.,
 3715, 10859
 Irving, L., 3781
 19099, 10930, 12643
 Irwin, D. A., 5870
 Irwin, J. O., 14809
 Irwin, M. H., 7495
 Irwin, M. R., 1009
 1015, 5343, 14371
 Isaacs, B. L., 12643
 Isaacs, M. L., 2675
 Isaacs, R., 637
 Isac, C., 1970, 1971
 Ischrey, G., 10571
 Isch-Wall, P., 5830
 Isely, D., 15902
 Isenberg, R. M., 7573
 Isensee, I., 12816
 Isenwood, F. A., 12115
 Ishihara, M., 850
 Ishihara, T., 15688
 Ishino, N., 12891
 Isida, M., 13433
 Isihara, T., 7771
 Isisawa, M.,
 15015, 16561
 Isler, H., 9547
 Isler, O., 2086, 7492
 Isnard, J., 4408
 Israel, P., 8667
 Israëls, M. C. G., 7879
 7880, 15003
- Issekutz, B. v. Jr.,
 16782
 Issler, A., 12853, 12856
 Istrati, G., 4462
 4463, 13434
 Itallie, L. V., 3045
 Itallie, T. B. v., 17583
 Ito, A., 5905
 Ito, H., 1101, 2816
 Itoh, C., 4531
 Itoh, R., 12892
 Ittner, N. R., 3707
 Itzerott, D., 6568, 12165
 Ivan, 2219
 Ivanauskas, T., 12438
 Ivancevic, I., 531, 12893
 Ivanic, M., 1722, 8719
 Ivaniskaia, A. F., 11452
 Ivanoff, S. S.,
 3169, 15813
 Ivanov, M. F., 10835
 Ivanov, N. N., 9114
 Ivanov, N. P., 13806
 Ivanovics, G., 851
 919, 2533, 6122
 Iverson, V. E., 6515
 Ives, P. T., 8953
 Ives, R. L., 12591
 Ivlev, V. S., 14398
 Ivy, A. C., 470, 2138
 3682, 3752, 3827
 3828, 7244, 7666
 9195, 9268, 9311
 11032, 11335, 12643
 12877, 12955, 14613
 14680, 14856, 15079
 Iwadare, S., 1421
 Iwaki, T., 17267
 Iwanoff, X., 8695
 Iwanowska, J., 14647
 Iwata, J., 15252
 Iwata, Y., 1449, 12121
 Iyengar, A. V. V., 3056
 3100, 3163
 Iyengar, M. O. T.,
 12219, 12368
 Iyengar, N. K.,
 188, 12505
 Iyer, B. H., 6547
 Iyer, P. V. S., 13650
 13651, 13653
 Iyer, S. G., 2633
 Izard, Y., 13400
- I
 Jablovkov, A., 16030
 Jablonowicz, J. M., 9857
 Jablonski, W., 750, 2471
 Jaccard, P., 4934, 13785
 Jack, E. L., 9813
 Jackley, A. M., 5240
 Jacklin, A. W., 10199
 Jackman, R. J., 14569
 Jacks, G. V., 2965, 5370
 Jackson, A. V.,
 9942, 9943
 Jackson, C. F., 5234
 Jackson, C. M., 3708
 Jackson, H. C.,
 8077, 13685
 Jackson, H. H. T.,
 5219, 14312
 Jackson, H. J., 5500
 Jackson, J., 2676
 Jackson, L. W. R.,
 15816
 Jackson, M. L.,
 6498, 10783
 Jackson, R. B., 8658
 Jackson, R. L., 7819
 7869, 11266
 Jackson, R. W., 289
 291, 14440
 Jackson, S. H., 3582
 Jackson, T. A.,
 7619, 11119
 Jacob, H. E., 3169
 Jacob, K. C., 10192
 Jacob, V. P.,
 10442, 15970
 Jacobi, H. P., 14874
 Jacobi, L., 7862
 Jacobs, H. R., 4248
 Jacobs, J. L., 17155
 Jacobs, L., 5092
 Jacobs, M. H., 7244
 Jacobs, M. R., 8536
 Jacobs, W. A.,
 8560, 17666
 Jacobsen, A. T. B., 4230
 Jacobsen, E., 532
 2284, 14819, 14820
 Jacobshagen, E., 9742
 Jacobsohn, D.,
 3930, 3931
- Jacobson, E., 12643
 Jacobson, H., 18026
 Jacobson, W., 14930
 Jacoby, A.,
 15199, 17258
 Jacot, A. P.,
 1671, 17982
 Jacot-Guillarmod, C.,
 7086
 Jacques, A. G., 3071
 3072, 3073, 10309
 10310, 15724, 15725
 Jaczewski, T., 6911
 Jadassohn, W., 8110
 Jafari, H., 974
 Jaeger, W., 9222
 Jaensch, P. A., 9460
 Jaeschke, J., 123, 7196
 Jaffe, H. L., 11189
 Jäger, G., 10020
 Jagger, I. C., 1482, 5294
 Jagoe, R. B., 11973
 Jahiel, R., 13435
 Jahn, C., 5987
 Jahn, E., 4482
 Jahn, G., 2206
 Jahn, T. L., 4002
 4003, 12648, 14704
 Jahnke, F., 417, 852
 853, 854, 855, 4659
 Jahnke, H., 12154
 Jahnke, J., 623
 Jailer, J. W., 694
 Jakes, E., 12067, 15709
 Jakob, C., 4295
 5893, 7912, 12297
 Jakovlev, A. G., 15804
 Jalavisto, E.,
 11150, 16683
 Jalowy, B., 4828
 5468, 11393
 James, A. L., 1435
 James, E. S., 9695
 James, H. R., 7224
 James, M. T., 1622
 3373, 5150, 6901
 6902, 12369, 18004
 James, N., 1050
 James, N. D. G.,
 8537, 15651
 James, S. P., 12254
 James, W. O., 10324
 Jameson, E., 7351
 Jameson, P. O., 7645
 Jamieson, W. A., 896
 11555, 13470, 17189
 Jamuni, A., 760
 Jandolo, E., 8696
 Janes, B. E., 14103
 Janes, J. M., 11046
 Janes, M. J., 14117
 Janes, R. G., 3845
 Janeway, C. A.,
 6133, 6139
 Jang, C. S., 12884
 Janisch, E., 3194
 Janisch-Raskovic, V.,
 13206
 Janitzky, A., 3575
 Janke, A., 17458
 Janonis, B., 6277
 Janse, A. J. T.,
 7086, 12480
 Jansen, A., 849
 Jansen, J., 8358
 Janse-Stuart, C., 11017
 Janson, R. W. G., 10252
 Janssen, H., 3734
 Janssen, J. F. Jr.,
 1863, 12627
 Janssen, R. E., 15429
 Jantzon, H., 5988, 5990
 Jaques, F. L., 1674
 Jaques, L. B.,
 2308, 3638
 Jarcho, S., 1790
 Jaretsky, R.,
 1334, 16783
 Jarisch, A., 5766
 Jarres, J. J., 16316
 Jarrige, J., 3326
 Jary, S. G., 12193
 Jasama, B. I., 2226
 Jäschock, H., 15310
 Jatkar, S. K., 4907
 Jatschewa, Z. K., 15375
 Jaulmes, C., 3773
 6102, 6103, 13486
 Jaworski, J., 8406
 Jay, P., 15297
 Jayle, M., 14511
 Jeaffreson, B. L., 15027
 Jeannel, R., 3327, 8770
 Jeannet, G., 13436
 Jeannerat, J., 5450
 13363, 13366
- Jean-Prost, P., 8771
 Jedlicky, A., 14886
 Jeffers, W. A.,
 378, 12643
 Jeffrey, E. C.,
 7096, 7117
 Jeffreys, H., 16218
 Jeffries, C. D., 15571
 Jellinek, E. M., 10946
 16430, 16726
 Jellison, W. L.,
 15311, 18036
 Jen, P. C., 2024, 3702
 Jeney, A. v., 4124
 7772, 7773
 Jenke, M., 7352
 Jenkins, A. E., 2798
 2804, 2805
 15451, 15889
 Jenkins, G. B., 8044
 Jenkins, G. L.,
 544, 10289
 Jenkins, H. L., 9889
 Jenkins, J. A., 14365
 Jenkins, J. M., 13816
 Jenkins, J. M. Jr., 17584
 Jenkins, W. A.,
 10113, 17835
 Jenkins, W. L.,
 2207, 2208, 5495
 9461, 14706, 16679
 Jenks, J. L., 4098
 Jennings, D. A., 14574
 Jennings, D. S., 6504
 Jennings, H. S.,
 3262, 7143
 Jennings, M. A.,
 363, 14574
 Jenny, H., 12057
 Jensen, A. J. C.,
 1864, 1865
 Jensen, A. S., 3382
 Jensen, E., 989
 2677, 8283, 11268
 Jensen, H., 3417, 16615
 Jensen, H. W., 10716
 Jensen, J. P., 9477
 Jensen, K., 18715
 Jensen, K. A., 2088
 Jenss, R. M., 11271
 Jephcott, C. M.,
 2422, 7922
 Jepson, W. L., 3420
 Jerace, F., 227, 969
 1055, 1557, 6738
 Jermain, W. S. J., 17088
 Jerstad, R. J.,
 7713, 9145
 Jerram, M. R. K., 13960
 Jersild, M., 4203, 4249
 Jesserer, H., 4104
 Jett-Jackson, C. E., 9696
 Jeune, M., 16935
 Jewell, M. E., 3498
 Jewett, F. L., 4992
 Jewett, H. H., 14244
 Jewett, S. G., 5207
 Jezic, J., 2699
 Jobbins, D. M., 1526
 Jobling, B., 3337, 18005
 Joachim, K.,
 11139, 12643
 Jacob, H. E., 13904
 Jocz, T. R., 13512
 Jodet, P., 16009
 Joel, W., 4250
 Joffievsky, V., 17237
 Johann, H., 2806
 Johansson, M. W.,
 17259
 Johansen, A. H., 2393
 Johlin, J. M., 13437
 John, R., 12136
 John, W., 15689
 Johnpulle, A. L., 14063
 Johns, C. K., 9814
 11778, 11779, 11780
 Johnsen, S., 1644
 Johnson, A. A., 4830
 Johnson, A. C., 11315
 Johnson, B.,
 10752, 17333
 Johnson, B. C.,
 1941, 3567
 Johnson, B. F., 15231
 Johnson, C. M., 8691
 15335, 15955
 Johnson, D. S., 10164
 Johnson, D. W., 11481
 Johnson, E. L., 1385
 15753, 17714
 Johnson, E. M., 11766
 15889, 17807
 Johnson, E. P., 10494
 Johnson, E. R. F., 10688

- Johnson, G. T., 6368, 8597
 Johnson, G. V., 10391
 Johnson, H. W., 3169
 3823, 15889
 Johnson, I. J., 16172
 Johnson, J., 3169
 12134, 15838
 Johnson, J. R., 4078, 7693
 Johnson, J. W. Jr., 7836
 Johnson, L. M., 2178
 Johnson, L. P., 12283
 Johnson, L. P. V., 1748, 12530
 Johnson, L. V., 7642, 16516
 Johnson, Sister M. B., 12720
 Johnson, M. J., 2749
 6260, 15398
 Johnson, M. L., 10999
 Johnson, M. W., 17969
 Johnson, N. L., 16219
 Johnson, P. E., 9660
 Johnson, R., 7399
 Johnson, R. B., 5230
 Johnson, R. E., 861, 8766
 Johnson, S. A., 15369
 Johnson, S. R., 1972, 15090
 Johnson, V., 351, 2809
 Johnson, W. A., 16312
 Johnson, W. H., 5102, 6767
 Johnston, C. G., 12643
 Johnston, C. N., 14033
 Johnston, C. O., 10344
 Johnston, C. S., 7047
 Johnston, G., 12643
 Johnston, G. W., 7803
 Johnston, I. M., 1645
 Johnston, I., 11886, 11887
 Johnston, J. C., 15599, 15600
 Johnston, J. H., 7559
 Johnston, J. M., 4293
 Johnston, J. R., 1049
 Johnston, M., 6958
 Johnston, M. W., 7431
 Johnston, R. L., 2310
 Johnston, S., 17684
 Johnston, S. M., 2325
 Johnston, T. H., 3279
 3280, 3298, 14214
 Johnston, W. R., 11767
 Johnstone, J. T., 16132
 Jokl, E., 9579
 Joling, K. F., 14215
 Jollis, Y., 7144
 Jolly, J., 8043
 Joly, E. de., 15942
 Jomain, J., 13006
 Jonas, A. F. Jr., 961, 2359
 Jonas, F., 7188, 9018
 Jonchère, H., 8142
 Jones, A. H., 10047
 Jones, A. T., 11360
 Jones, B. A., 6236
 Jones, C. A., 11651
 Jones, C. F., 16799, 17334
 Jones, C. M., 2284
 Jones, C. P., 18599
 Jones, C. R., 10337
 Jones, D. B., 12667
 Jones, D. F., 75
 Jones, D. S., 12581, 12592
 Jones, E. T., 8036
 Jones, E. T., 4331, 17372
 Jones, E. W. K., 10805
 Jones, F. G., 856, 11538
 Jones, F. N., 7620
 Jones, F. R., 1422
 3109, 17750, 17316
 Jones, G. H., 1467
 Jones, G. N., 4798
 8435, 8442
 Jones, H. A., 1246
 12081, 12235, 15601
 Jones, H. D., 4125
 Jones, H. W., 10216
 Jones, H. W. Jr., 14812
 Jones, I. R., 9819
 Jones, J. H., 11023
 Jones, J. M., 11432
 Jones, J. W., 13816
 Jones, K. K., 12643
 Jones, L. F., 5680
 Jones, L. H., 8621
 Jones, L. R., 17135
 Jones, L. T., 8737
 Jones, M., 14192
- Jones, M. P., 10384
 Jones, M. S., 7553, 14966
 Jones, O., 6263
 Jones, R. B., 15273
 Jones, R. M., 11386
 Jones, R. W., 5949
 Jones, S., 6959, 12422
 Jones, T., 681, 2437
 Jones, T. D., 4481
 4487, 4488
 Jones, T. L., 11731
 Jones, W. N., 14073
 Jones, W. R., 9992
 Jonesco, G., 5723
 13125, 13126, 14730
 Jonesco-Sisestl, N., 7690
 Jongh, S. E. de., 3822
 4281, 5793, 7549
 9822, 9823, 12951
 12960, 16606, 16616
 Jonkus, O., 1935
 Jonesco, D., 13438
 Jönsson, B., 6211
 Jonsson, G., 2692, 17070
 Joost, C. R. N. F. v., 11645, 12560
 Joranson, Y., 10495
 Jordan, C. F., 8298
 Jordan, H. E., 5835
 5882, 15063
 Jordan, H. J., 2256
 5605, 7686
 9498, 16716
 Jordan, K., 12494
 Jordan, L. W., 8737
 Jordan, P., 8868
 Jordani, L., 6105
 Joret, G., 11967
 Jørgensen, H. C., 9815
 Jorpes, E., 2311
 5767, 9151
 Jørstad, I., 8396
 Joseph, L., 13207
 Joseph, M., 7246
 Joseph, N. R., 7247, 12643, 12824
 Joseph, N. R., 12740, 14483
 Josephs, H. W., 638
 639, 640, 16508
 Josephson, B., 3757
 3758, 7512, 9258
 Josephson, D. V., 17412
 Josephson, E. M., 15194
 Joshi, A. C., 8450
 11920, 15521
 Joslin, E. P., 4282, 7899
 Joslyn, M. A., 2726
 Jossander, M., 6344, 8398
 Jost, A., 12944, 14612
 Jost, L., 12068
 Joutauz, 2219
 Joubert, G., 14670
 Joubin, L., 8877
 Joukovsky, N., 16436
 Jourdain, F. O. R., 5177
 Jourdan, F., 2576
 6100, 8151, 13160
 13481, 14721, 14821
 Joy, E. A., 15080
 Joyet-Lavergne, P., 12780, 12961, 12962
 Joyeux, C., 6739
 Joyner, A. L., 900
 902, 2569
 Joyner, J. F., 8929
 Juday, C., 7225, 7230
 7231, 7235, 7236
 Judd, B. I., 7197
 9019, 10783
 Judd, D. B., 1336
 Jude, A., 4464
 Judenko, E., 1494
 Judy, F. R., 5909
 Jühling, L., 8613, 8639
 Juhn, M., 699
 Juhnke, G., 4810
 Jukes, T. H., 733
 3082, 9299, 11502
 12843, 14560, 16340
 Julianello, L. A., 4594
 11539, 17156, 17310
 Julien, P. F. J. A., 9462
 Jump, E. B., 5906
 Jump, K. B., 13801
 Jung, F., 12669, 16784
 Jung, F. T., 12643
 Jung, R., 3610
 4018, 11403
 Jungblut, C. W., 14941
 Jungherr, E., 6239
 Jungkuz, R., 12044
 Jungner, G., 8757, 8758
- Junowicz-Kocholaty, R., 16348
 Jurgens, G. H., 12918
 Jusatz-Gotha, H. J., 14387
 Just, E. E., 7091, 13344
 Just, T., 3435, 11931
 Juster, I. R., 13119
 Justin-Besangon, L., 13103, 14515
 Juttmaer, H. M. v., 990
 Juul, A., 13162
- K
 Kabak, J. M., 16932
 Kabat, E. A., 2546, 2582
 Kabat, H., 4079
 7714, 11188, 12643
 Kadanoff, D., 9743
 Kadish, M. A., 624
 Kadićek, S., 2360
 Kadow, K. J., 1468
 3169, 12179
 Kadrnka, S., 531, 12893
 Kadykov, B. I., 2195, 4054
 2195, 2412
 Käufer, J. P., 5865, 14922
 Kagan, M., 5066
 Kagawa, F., 7097
 Kagy, J. F., 14105
 14106, 14110
 Kahawita, R., 13887
 Kahl, W., 10496
 Kahlson, G., 7774, 16642
 Kahmann, H., 15000
 Kahn, I. S., 13439, 17154
 Kahn, J. R., 9517
 Kajser, K. G., 7913
 Kalju, M., 9588, 12668
 Kalries, A., 2646, 9826
 Kalris, N. M., 9259
 Kaiser, B. W., 2477
 Kaiser, M., 228
 Kaiser, V. G., 10199
 Kajala, L. B., 1171
 Kalachny, J., 2074
 Kalaja, L., 2270
 Kalckar, H., 14455
 Kalfet, B., 8087
 Kalela, A., 15652
 Kaliss, N., 7145
 Kalkschmidt, J., 6284
 Kallos, J., 16562
 Kalmbach, E. R., 17388
 Kalmus, H., 1558
 Kalnins, A., 15653
 Kalowski, A. A., 15406
 Kalshoven, L. G. E., 14180, 14131
 Kaltreider, N. L., 368, 369
 Kamal, M., 3206, 5068
 Kamat, P. N., 4972
 Kamby, P. E., 6861, 15472
 Kamijo, N. G., 13445
 Kamimura, T., 5866, 7659
 Kaminski, R., 16715
 Kamlet, J., 14850
 Kamman, G. R., 15195
 Kammlade, W. G., 6717
 Kamnev, I. E., 10840
 Kampmeier, E. H., 9521
 Kampmeier, R. H., 16914
 Kanatake, Y., 12894
 Kanatsus, H., 13298
 Kanazawa, I., 8223, 7854
 Kanda, T., 8374
 Kanda, Z., 4126
 9551, 16773
 Kändler, R., 3531
 Kane, L. W., 7688
 Kanehira, R., 1111
 1116, 6382
 Kaneko, S., 12669
 Kangas, E., 15654
 Kanitkar, S. V., 4146
 Kanitkar, U. K., 8591
 Kanivets, I. I., 6469
 Kannangara, A. W., 14154
 Kanne, E. M., 9870
 Kanner, O., 9702, 13173
 Kantor, N. G., 4021
 Kanyo, B., 857
 Kanzer, M., 7646
 Kaplan, A., 14440
- Kaplan, F., 15818
 Kaplan, L. G., 16736
 Kapnick, I., 8117
 Kapoor, S. L., 14013
 Kapp, E. M., 8264
 Kappas, A. L., 9858
 Kapri, M., 4051
 Karady, S., 12643, 12751
 Karaki, H., 5907
 Karasawa, K., 5288
 Kardo-Sysöyeva, E. K., 3088A, 7486
 Karling, J. S., 2807
 10114, 15452, 17490
 Karlson, A. G., 6123
 Karman, W., 2894
 Karn, H. W., 16672
 Karnofsky, D., 9324
 Karp, M. L., 14359
 Karpati, Z., 10706
 Karpe, G., 2209, 13064
 Karr, E. H., 14111
 Karraker, P. E., 13818, 15552
 Karrer, P., 1925
 1926, 2055, 2056
 2057, 2087, 2088
 3846, 7492, 9222
 9241, 9244, 9325
 12928, 12029, 12030
 12031, 12032, 16552
 Karrer, P. R., 1924
 Karrer, W., 9244
 Karshan, M., 15087, 15330
 Kasahara, S., 8154
 13565, 13587
 Kasahara, Z., 15710
 Kasai, M., 12122
 Kasamatu, H., 7660
 Kaser, M. M., 561
 Kasprzyczakowska, K., 5491
 Kass, J. P., 14540
 Kassell, B., 208
 1927, 3676, 3677
 Kassler, O. H., 2257
 Kassop, H., 6119
 Kaston, B. J., 3319
 Kasuga, T., 13440
 13441, 17301
 Kasuya, I., 13704
 Kasznica, J., 17397
 Katayama, Y., 7128
 Katchalsky, A., 7418
 Kater, J., 3847
 Kato, K., 8738
 Katoh, M., 7775
 Katsurada, F., 4204
 Katterman, G., 42
 Katz, B., 9499
 13079, 13092
 Katz, F. M., 975
 Katz, G., 213
 5496, 8708
 Katz, J. R., 5431
 Katz, K., 7837
 Katz, L. N., 2143
 7088, 7716, 11189
 11181, 11182, 12643
 14655, 14832, 16736
 Katzenellenbogen, L., 16922
 Katzenstein, F. C., 9326
 Katzenstein, L., 4465
 Katzin, B., 12643
 Katzin, E. M., 13523, 17234
 Katznelson, H., 17427
 Kauerz, F., 938
 Kaufert, F., 5008
 Kauffmann, F., 11540, 15417
 Kauffmann, G., 826
 Kauffmann, B. P., 87
 7118, 16163
 Kauffmann, F., 10088
 Kaufmann, O., 858
 Kaulla, K. N. v., 5506
 Kaup, D. H., 7839
 Kaura, R. L., 2638
 Kausche, G. A., 6651
 6652, 6653, 8613
 10361, 15824, 17731
 Kausik, S. B., 2907
 10168, 15522
 Kavaliridze, V., 1247
 Kawaguchi, E., 1723
 1724, 7146
 Kawaguchi, S., 16349
 Kawahara, J., 4127
 Kawahata, K., 4205
 Kawai, I., 14064
 Kawamura, R., 8154, 13565
- Kawamura, T., 4977
 Kawano, N., 16617
 Kawasaki, O., 14029
 Kay, L. A., 15690
 Kay, W. E., 11589
 Kayashima, S., 12710
 Kaye, R. C., 1337
 Kaye, M., 13278
 Kayser, C., 12773
 Kayser, H. W., 4080, 14823
 Kayser, M. E., 13372
 Kazano, T., 16079
 Kazeeff, W. M., 15418
 Kazeeff, W. N., 5260
 Kazitatz, K. F., 807
 Kearney, T. H., 7129
 Kearns, C. W., 3187
 Kearns, H. G. H., 1469
 Kearns, V., 8467, 10193
 Keck, D. D., 3435
 4784, 5266
 Keef, C. S., 2658, 15196
 Keelley, J. K., 4084
 Keen, A. M., 12315
 Keen, J. A., 16956
 Keenan, H. C., 12643
 Keeser, E., 14824
 Keet, J. D., 1688
 Keet, J. D. M., 4892
 Keeton, R. W., 1973
 12643, 12858
 Kehl, H., 3470
 Kehl, R., 13033
 Kehoe, K., 13324
 Kehoe, R. A., 11860
 Keil, A., 13807
 Keil, E., 10021
 Keil, J., 3030
 Keil, S. F., 5179
 Keil, W., 12820
 Keilin, D., 5509
 Keilth, A., 723
 17018, 17019, 17024
 Keith, J. D., 2343
 Keith, N. M., 5719
 Keitt, G. W., 3169, 17782
 Kéler, S., 3369
 Kélez, G. B., 1873
 Kellaway, C. H., 520, 521, 3569
 5164, 9103, 14440
 Keller, A. D., 453
 454, 12643
 Keller, A. E., 5093, 6742
 Keller, C. J., 3712
 Keller, G., 4321, 4767
 Keller, H., 1924, 1925
 1926, 9325, 12029
 Keller, J., 4395
 Keller, K., 11483
 Keller, W., 12520
 Kellermann, J. H., 16456, 16458
 Kellersmann, E., 6119
 Kellert, O. E., 9859
 Kelley, E. G., 7838, 7997
 Kelley, J. L., 17622
 Kelley, O. R., 7390
 Kelley, R. W., 14996
 Kelley, V. W., 13888
 Kelley, W. H., 11646
 Kelley, W. P., 2967
 6499, 10194, 17617
 Kellie, A. E., 3640, 7487
 Kellner, H., 14746
 Kellogg, R., 5235
 Kellogg, W. N., 9443, 16676
 Kelly, C. D., 2729
 10065, 10066
 Kelly, C. J., 9188
 Kelly, D. F., 13860
 Kelly, E. C., 13889
 Kelly, G. L., 7590
 Kelly, K. L., 1336
 Kelly, M., 9938
 Kelly, P. L., 15362
 Kelly, P. L., 2162
 Kelly, R. G., 13632
 Kelm, H., 12448
 Kelsall, A., 10875
 10465, 17836
 Kelsall, M. A., 9684
 Kelsey, F. E., 7804, 14456
 Kelsey, H., 8233
 Kelson, L. E. A., 11143
 Kemkes, B., 11610
 Kemmerer, A. R., 320
 Kemp, A. E., 1040
 Kemp, H. A., 2547

- Kemp, J. E., 8121, 15312
 Kemp, S., 3520
 Kemp, T., 4283
 Kempf, A. H., 13442, 13462
 Kempf, J. E., 9860
 Kempner, W., 9617
 Kempton, J. H., 12643, 17459
 Kempton, J. H., 3430, 16180
 Kempton, R. T., 14671
 Kench, J. E., 8502
 Kendall, E. C., 3658, 14631
 Kendall, M. G., 1812, 8969
 Kendall, S. F. H., 8969
 Kendrick, A. B., 1973
 Kendrick, D. B. Jr., 4081, 17260
 Kendrick, J. B., 14081
 Kendrick, P., 9861
 Keng, Y. L., 2835
 Kenjo, M., 1192
 Kennard, G., 3169
 Kennard, M. A., 455, 12643
 Kennaway, E. L., 568
 Kennaway, N. M., 568
 Kennedy, C. H., 1830
 Kennedy, F., 12386, 16047
 Kennedy, F., 2023
 Kennedy, J. A., 3962, 4086, 7575
 Kennedy, W. L., 10962
 Kennedy, W. L., 13086
 Kennedy, W. P., 5883
 Kennett, S. J., 15415
 Kenney, A. S., 2578, 11267
 Kenny, F. E., 17385
 Kent, G. C., 12167, 14097
 Kent, G. T., 12643
 Kent, J., 17336
 Kentenich, A., 8710
 Kenton, H. B., 13239
 Kenway, G., 1947
 Kenyon, A. T., 14964
 Kenyon, F., 3968
 Kenyon, M. B., 11219, 11220
 Keogh, E. V., 946, 8233
 Keonsley, W. F. F., 15549
 Képinov, L., 12963
 Kepl, M., 9926, 15197
 Kepler, E. J., 587
 Kepner, W. A., 12294, 12295
 Keppel, D. M., 9771
 Ker, F. I., 4471
 Keränen, L., 11150
 Kerby, G. P., 13705
 Keresztesy, J. C., 14563
 Kerley, C. G., 562
 Kern, F. D., 6345
 Kern, R. A., 6059, 6068, 11541
 Kern, R. A., 13443, 15147, 17187
 Kernohan, J. W., 16828, 16945
 Kerpel, D. A., 4811
 Kerppola, W., 5592
 Kerr, D. A., 9993
 Kerr, H. W., 4859, 4860
 Kerr, J. G., 14569
 Kerr, K. B., 4548
 Kerr, P. F., 2420
 Kerr, T. W. Jr., 10392
 Kerr, W. J., 490
 Kersting, F., 17733
 Kertesz, Z. I., 189, 10048
 Kervingant, M., 17368
 Kessel, E., 15932
 Kessel, J. F., 4616, 6060
 Kessel, J. F., 6165, 8122, 15166
 Kessell, S. L., 9020
 Kessler, M. M., 12643
 Kessler, R., 14489
 Kessler, W. R., 4544
 Kesten, H. D., 9552
 Kesteven, H. L., 13628
 Keston, A. S., 7419
 Keston, A. S., 7421, 7426
 Keszytyś, L., 3759
 Ketchum, B. H., 13975, 15698
 Ketelesen, O., 859
 Kettler, H., 15313
 Keutmann, E. H., 8694
 Keutmann, E. H., 8739, 5657
 Key, J. A., 9604, 14913
 Keyers, J. E. L., 2271
 Keys, A., 5720
 Keys, A., 9522, 9523, 13120
 Khadilkar, V. N., 5829
 Khalapur, A. M., 1412, 13796
 Khastovich, R. I., 860
 Khatuntzev, J. A., 13817
 Khaustov, N. V., 9091
 Khoo, G. G., 16742
 Khoroshailov, N. V., 15553
 Khovine, Y., 4399, 12781
 Kian, L. P., 418
 Kiang, T. S., 9862
 Kibler, C. S., 15165
 Kidd, F., 1446
 Kidd, J. G., 10223, 10325, 10326
 Kidd, J. G., 10376, 17716, 17718
 Kidd, J. G., 588, 861, 862
 Kidd, J. G., 863, 6163, 13420
 Kidder, G. W., 3263
 Kiefer, F., 6837
 Kiefer, F., 6838, 6839, 6840
 Kiefer, F., 6841, 6842, 6843
 Kiefer, F., 6844, 8753, 8754
 Kieselhauser, G. E., 12323A, 12324, 14235
 Kienholz, J. R., 3169, 6654
 Kienholz, R., 3021, 3164
 Kies, M. W., 9189, 16479
 Kiesselbach, T. A., 6491, 13840
 Kiessling, W., 4047
 Kiguchi, S., 17158, 17159
 Kihara, H., 7098
 Kihara, Y., 12895
 Kik, M. C., 2025
 Kik, M. C., 11347, 14529
 Kikkawa, H., 1725, 1773
 Kikuth, W., 8178, 11590
 Kilbury, M. J., 9967
 Kilduffe, R. A., 11660
 Kilgore, F. H., 14942
 Kille, F. R., 5969
 Killian, C., 10784
 Kim, C. H., 9261, 16923
 Kimball, A. C., 13418
 Kimball, R. F., 1774, 11105
 Kimble, M. S., 16350
 Kimizuka, T., 13163
 Kimmel, L., 10996
 Kimmelstiel, P., 2147, 7863
 Kimmey, J. W., 8631, 15851
 Kimmins, D. E., 12494
 Kimura, A., 6414
 Kimura, R., 9957
 Kimura, S., 6415
 Kimura, T., 12902, 13164
 Kin, S., 17318
 Kincaid, R. R., 15890
 Kincaid, H. E., 4374
 Kindall, L. E., 11088
 King, C. G., 10856
 King, C. J., 12109, 14440
 King, C. J., 16531, 16533
 King, C. J., 1481
 King, E. J., 5507
 King, F. G., 13355
 King, F. G., 13356, 13357
 King, H. D., 3988
 King, H. D., 11303, 12551
 King, J. B., 5706
 King, J. D., 16995
 King, J. R., 1172, 13890
 King, J. T., 4231, 11591
 King, J. W., 13706
 King, K. M., 1496, 9001
 King, L. S., 11626, 11627
 King, L. S., 14915, 14982, 16899
 King, M. J., 2385
 King, N. L., 1688
 King, R. L., 742
 King, R. L., 1716, 2466, 4322
 King, R. T., 10823
 King, T. H., 3169
 King, W., 14288, 14412
 King, W. A., 17068
 King, W. B. R., 17024
 King, W. V., 1513
 Kingdon, K. H., 12696
 Kingsbury, B. F., 15020, 15064
 Kingsbury, R. M., 8516
 Kinloch, J. B., 8022
 Kinney, L. C., 14887
 Kinoshita, S., 12069
 Kinoshita, S., 15710, 15718
 Kinoshita, H., 10841
 Kinsey, H. L., 13444
 Kinsman, G., 7456, 11268
 Kinter, E., 10770
 Kintner, K. E., 1593
 Kiplinger, D. C., 15706
 Kirby, H. Jr., 12284
 Kirby, R. S., 3169, 15889
 Kirch, E. R., 17751
 Kirchheimer, F., 2783
 Kirchman, L. L., 14825
 Kirk, E., 641
 Kirk, G. D., 1928, 2394
 Kirk, L. E., 17126
 Kirk, R., 6740, 15314
 Kirkman, N. F., 10910
 Kirkpatrick, W. F., 8336
 Kirsch, W., 5988
 Kirschbaum, A., 5989, 5990, 8088
 Kirschstein, W., 591, 5674
 Kirschner, L., 13644
 Kirschner, M., 4128
 Kirschstein, W., 11817, 15453
 Kirshbaum, J. D., 5811
 Kirste, A., 2941
 Kiryu, T., 1476
 Kishi, S., 4206
 Kishimoto, E., 1703
 Kisitani, T., 17460
 Kiss, F., 17652
 Kissel, P., 13279
 Kissler, J., 8538
 Kiszely, G., 10842
 Kitagawa, Y., 12752
 Kitamura, S., 11888
 Kitamura, S., 17529, 17530
 Kitaoka, M., 952
 Kitasato, Z., 15691
 Kitchen, P. C., 7670
 Kitchen, S. F., 5086
 Kitchen, S. F., 5088, 8169, 14163
 Kitchen, P. C., 13308
 Kitching, J. A., 3264, 6768, 10796
 Kitching, J. A., 12643, 14750, 15977
 Kittredge, J. Jr., 7199, 7200
 Kitzmiller, K. V., 11361
 Kiuchi, H., 2647
 Kiuchi, S., 3222
 Kiyoto, Y., 11031
 Kjems, H., 12721
 Klaas, H., 1213
 Klages, F., 17668
 Klar, E., 589, 12834
 Klarer, W., 12976
 Klatskin, G., 533
 Klauber, L. M., 18053
 Klauber, L. M., 18054, 18055
 Klabahn, H., 10105
 Kleczkowska, J., 9863
 Kleczkowski, A., 5508, 9863
 Kleeborg, E., 17261
 Kleefeld, E. A., 14828
 Kleeman, A., 8110
 Kleiber, M., 9181
 Klein, B. A., 2381
 Klein, C., 11197
 Klein, F., 13303
 Klein, F., 15153
 Klein, J. R., 11080
 Klein, M., 11106
 Klein, M., 11405, 14682
 Kleiner, A., 8837, 18069
 Kleintert, H., 5991
 Kleinholtz, L. H., 442
 Kleinholtz, L. H., 3935, 3936, 12964
 Kleinman, A., 12896
 Kleinstüber, K., 8853
 Kleinzeller, A., 11442
 Kleitman, N., 2220
 Kleitman, N., 2309, 9446, 16697
 Klemme, A. W., 10175
 Klemola, E., 5353, 5721
 Klemola, V. M., 5419
 Klemperer, F. W., 2102
 Klenk, E., 14722
 Klenke, W., 5928
 Klewaw, G., 15194
 Kleyn, A. de, 9489
 Kleyns, F., 14710
 Klie, W., 6845
 Klie, W., 6846, 8755, 16018
 Klieneberger, E., 1056, 15360
 Kligler, I. J., 950
 Kligler, I. J., 2598, 2599, 4466
 Klika, J., 7201, 7202
 Klimmer, M., 6283
 Klimmer, O., 7309
 Klimo, Z., 14508
 Kline, B. E., 570
 Kline, B. E., 12643, 14905
 Kline, B. S., 3265
 Kline, E. M., 11189
 Kline, H., 992
 Kline, R. F., 9142, 12935
 Kling, D. H., 5836
 Klingebell, K. H., 3989
 Klingner, H., 10378
 Klingman, W. O., 11263
 Klinke, J., 11289
 Klipple, G. E., 17571
 Klobusitzky, D. v., 864, 4467
 Klodt, W., 2075
 Klose, A., 5570, 5571
 Klopp, C. T., 460
 Klose, A., 7496
 Klose, A., 9243, 16547, 16548
 Klotz, A. W., 6312
 Klotz, L. J., 1482, 6630, 6662
 Klotz, R., 12110, 15872, 17777
 Klotz, R., 9553
 Kmiecik, T. C., 10904
 Knabe, K., 12436
 Knapman, C. E. H., 17639
 Knapp, A. W., 2084
 Knapp, B. Jr., 9802
 Knappen, P., 9064
 Knauth, B., 8397
 Knaysi, G., 13682
 Knebel, R., 13135
 Knehr, C. A., 11134
 Kniaginichev, M. I., 17740
 Kniazuk, M., 11261
 Kniefall, H., 6276
 Knies, P. T., 17369
 Knight, B. C. J. G., 8361
 Knight, C. A., 17089
 Knight, E. C., 11766
 Knight, H. E., 12378
 Knight, M. K., 15283
 Knight, R. A. G., 4893
 Knight, R. L., 16173
 Knighton, H. T., 9703
 Knippenberg, E., 3099
 Knoblauch, E., 15503
 Knoblauch, H. C., 11970
 Knodel, H., 3074, 17690
 Knoefel, P. K., 7749, 9554
 Knoell, H., 12648, 13017
 Knöll, H., 15419
 Knolle, W., 2942
 Knoop, C. E., 8089, 133604
 Knoop, F., 292
 Knöpfle, L., 15694
 Knott, E. M., 9233
 Knott, F. A., 8266
 Knott, J., 17902
 Knott, J. E., 15602, 15741
 Knott, J. R., 2227, 7661
 Knower, H. M., 9686
 Knowles, F., 4410
 Knowles, F. G. W., 442
 Knowlton, G. F., 12868
 Knowlton, G. F., 10411
 Knowlton, G. F., 10433, 12405
 Knowlton, G. F., 16039, 18018
 Knox, C. W., 791
 Knox, C. W., 15123, 15124
 Knüchel, F., 642
 Knuchel, H., 15655
 Knudsen, H. V., 10067
 Knudsen, S., 10067
 Knudson, A., 1937, 11290
 Knüll, D. J., 15904
 Knüll, J. N., 14245
 Knuth, R., 6386A
 Knutson, J. W., 992
 Kobari, K., 8676
 Kobayashi, R., 13445
 Kobayashi, S., 8231
 Kobayashi, S., 6814, 16415
 Kobayasi, T., 13018
 Kōbe, K., 951
 Kobiakova, A., 15775
 Kobren, A., 11340
 Kobuski, C. E., 11889
 Koch, A., 1635, 14281
 Koch, F., 2548
 Koch, F. C., 759, 14964
 Koch, F. C., 13208
 Koch, G., 7696
 Koch, H. J., 5432
 Koch, H. R., 2995
 Koch, J., 2646
 Koch, R., 8240
 Koch, W. F., 2549
 Kochakian, C. D., 3848
 Kochakian, C. D., 9401, 12643
 Kochetkov, V. P., 6470
 Kocholaty, W., 190
 Kocholaty, W., 191, 192, 15424
 Kock, G. de, 8321
 Kodama, T., 8154
 Kodati, M., 15718
 Koefoed, H. G., 14519
 Koehler, R., 15556
 Koehler, B., 15536, 17804
 Koenig, E. C., 13101
 Koenig, F., 14888
 Koenner, D. M., 8024
 Koepfli, J. B., 17679
 Kōfarago-Gjelnik, V., 8411, 10706
 Koff, A., 12643
 Koffas, 2219
 Kofoed, S. E., 4668
 Kofoed, C. A., 6735
 Koford, C. B., 5240
 Kōgl, F., 14889
 Kohane, O., 6279
 Kohl, M. F. F., 7441
 Kohl, M. F. F., 7442, 7443
 Kohler, A., 14890
 Kohler, D., 13138
 Kohler, G. O., 7463, 10911
 Kohler, P., 6934
 Kohler, R., 4207
 Kohls, G. M., 6853, 6854
 Kohlstadt, K. G., 3946
 Kohman, E. F., 16459
 Kohmura, T., 7147
 Kohn, H. I., 7358, 12643
 Kohn, J. L., 15198
 Kohn, R., 534
 Kohn, M., 13587
 Kohn-Richards, R., 12643
 Koidzumi, G., 6387
 Kolesnik, A. A., 9236
 Kolesky, S., 9612
 Koletzko, J., 10905
 Kolisko, A., 1853, 14220
 Kolikwitz, R., 8359
 Koll, W., 4129, 9327
 Kollath, W., 2049
 Kollath, W., 2062, 9109, 9230
 Kollensperger, P. K., 535, 2228
 Koller, G., 3849, 12325
 Koller, L. R., 15755
 Koller, P. C., 1704
 Koller, P. C., 1775, 3982, 16161
 Koller, R., 12325
 Kolloff, H. G., 5768
 Kolmer, J. A., 2659, 4468, 4566
 Kolmer, J. A., 4567, 4568, 6061
 Kolmer, J. A., 8267, 8268, 9864
 Kolmer, J. A., 9927, 9994, 17160
 Kolmer, J. H., 13146
 Kolnitz, H. v., 12643
 Kolodny, M. H., 4546, 8294, 9910
 Kolodny, M. H., 10497, 12255, 15177
 Kolosov, N. G., 11373
 Kolosvary, G. v., 6847, 6860
 Kolosvary, G. v., 10572, 10586
 Kolosvary, G. v., 14225, 14236
 Kolosvary, G. v., 14240, 17986
 Kolouch, F. Jr., 14916
 Kolt, E. v., 10861
 Komai, T., 7148
 Komarov, S. A., 12643
 Komietani, P. A., 9500
 Komita, S., 4075
 Komiya, Y., 10542, 12670
 Komlós, E., 14853
 Kon, S. K., 5526, 7400
 Kon, S. K., 7458, 8066, 13359

- Kondi, A. 6727
Kondo, K. 14891
16859, 17161
Koneff, A. A. 15021
Konheim, B. G. 14723
König, D. 12506
König, F. 838
Konig, P. 864
Königstein, H. 14724
Koniuszy, F. 12020
Kono, M. 4469
Konsorski, J. 7777
Konzelmann, F. W. 4256
Koo, C. K. 8815, 8816
10091, 11718, 13860
Koolj, R. 16742
Koono, M. 16651
Koonz, C. H. 10872, 16164
Koopman, M. J. F. 3023
Koor, I. M. 1901
Kopaczewski, W. 10829, 10830
Kopeć, S. 717, 10995
Kopelievski, G. P. 12533
Kopeloff, L. M. 6062
Kopeloff, N. 6062
Koppányi, T. 5741
5769, 7769
7782, 18173
Koprowski, H. 16351
Korchin, B. 3770
Koref, O. 3850
Korenblit, R. S. 880
Korenevsky, V. 5630
11061, 11062
Korñek, J. 10084
Kornblith, B. A. 15199
Körner, F. 8087
Körner, H. 5138, 16205
Környey, S. 16940
Korodý, E. 6446
Korr, I. M. 9402
Korschelsky, R. 6876
Korschelt, E. 5913
Korstian, C. F. 15660
Kortschak, H. P. 1888
Kosaka, G. 11362, 16860
Kosar, W. F. 12538, 17696
Koschara, W. 13019
Koschucharoff, P. 866, 867
Koser, S. A. 4714
Kosintsev, A. 11399
Kosjakov, P. N. 17238
Kosse, J. 2326
Kossavitch, N. 14347
Köst, H. 4296
Koster, P. M. 2996
Kostermans, 2865
Kostermans, A. J. 1130
Kostic, D. 1558
Kostoff, D. 1705, 4993, 5820
7099, 16154, 16174
Kostuch, Z. 6063, 6113
Kostyal, L. 868
Koteen, H. 11113
Kotz, J. 9647
Kotzevalova-Gerbova, O. S. 869
Koucky, R. W. 9971
Kouri, P. 1594, 6141
6720, 6741, 14192
Kouvenaar, W. 1489
Kovács, E. 10253
Kovats, M. J. 10079
Kowalczyk, S. A. 1580
Kowallof, I. 2038
Kowarsky, H. 13001
Koyanagi, J. 16352
Koyanagi, S. 16517
Kozelka, F. L. 13178
Kozłowski, A. 6611, 17669
Koz'mina, N. P. 8079, 8094
Kozminski, Z. 7226
Kraatz, C. P. 7591, 12643
Kracke, R. R. 2313
Kraemer, E. O. 5510
Krafka, J. Jr. 4082, 17057
Krag, P. 6064, 6065
Krahulik, L. 4176
Kraimick, H. G. 7444
Krajewski, F. 7513
Krajan, A. A. 17001
Kral, J. 12643
Kramer, B. 5662
Kramer, F. 16714
Kramer, H. 10022
Kramer, K. 3615, 11151, 11152
11154, 13020, 16730
Kramer, M. 12137
Kramer, P. J. 6621
Kramer, S. D. 2613
Kramer, T. C. 9760
Kramp, P. 9744
Kranefeld, F. C. 3245
Krause, F. A. 6471, 11946, 17585
Krantz, H. 9772
Krantz, J. C. 2105
Krantz, J. C. Jr. 1318
2814, 2815, 2757
3685, 3688, 13178
Kranz, J. 4019
Krarup, B. 274
Krasnow, F. 11619
Kraske, G. 7227
Krasnoff, D. 9929
Kraus, J. E. 4987
Krause, A. C. 16353, 16354
Krause, G. 768, 17975
Krause, K. 8425
Krause, R. H. 10748
Krauskopf, B. 5733
Krauss, B. H. 6592, 15767
Krauss, W. E. 6005
6478, 8089, 13860A
Kraut, H. 16355
Krautman, B. 3583
Krautitz, D. 15232
Kraikov, S. V. 9478
Kraybill, H. R. 11947, 17601
Krebs, A. 3573, 3575
Krebs, K. 5992
Kreft, G. 2009
Krehbiel, R. H. 7592
Kreibohm de la Vega, G. A. 5034
6472, 6473, 6699
Kreienberg, W. 3471, 5701
Kreilkamp, B. I. 12643
Kreindler, A. 7690, 11356
Kreiss, H. A. 14216
Kreitmaier, H. 536
Krejci, L. E. 5510
Kreke, C. W. 1888, 2040
Kress, F. 4539
Kress, H. 8942
Kretschmer, E. 2458
Kreuder, E. 7778
Kreutz, H. 13819
Kreutzer, W. A. 1450, 15852
Kreuzwendedich von dem Borne, G. A. 3948, 5658, 12857
Kreyberg, L. 2361
Krichesky, B. 11107
Krieger, C. H. 3741
Krieger, V. I. 13037, 13038
Krieger, W. 2791
Kriesel, H. R. 6240
Krijthe, N. 14082, 15853
Krimberg, R. 3851
Kringstad, H. 12844
Krishna, S. 10466
Krishna Iyengar, C. V. 13786
Krishnan, B. G. 7402
10948, 10953
Krishnan, E. K. 10254
Krishnan, P. S. 5452
Kriss, M. 3678
Kristensen, M. 2835, 13448
Kristoffersten, S. 8838
Kritzmann, M. G. 9089, 9092
Krukova, Z. I. 14997
Kriz, J. R. 8360, 9968
Krober, F. 11638
Kroel, R. L. 3852
Kroening, F. 16861
Kroetz, C. 5717
Krogh, A. 1974, 9152
Krogh, C. V. 5929, 6066
Krogh, M. 264
Krogman, W. M. 2459, 15056
Krol, O. 10753
Kronfeld, P. C. 251
Kronfeld, R. 2446
Kröning, F. 4208, 16199
Krotkov, G. 14017, 17719
Krotzschmar, A. 12685
Krueger, A. P. 2619
4599, 9949, 13566
Krueger, P. F. 1038, 13683
Krüger, O. 5180
Krüger, E. H. 5930
Krüger, F. 12753, 14258
Krüger, O. K. 17162
Krüger, W. 4832, 11484
Krukoff, B. A. 10293, 11890
Krüková, N. 4950
Krukovsky, V. N. 8080
8081, 8083
Krull, H. 12423
Krull, W. H. 17936
Krumhaar, E. B. 2429, 5891
Krumbiegel, I. 5281
Kruse, H. D. 14518
Kruse, T. K. 31878
Krusen, F. H. 12643
Kruszynski (Wilno), J. 4367
Krzywanek, F. W. 17389
Kubiena, W. L. 2968
Kubo, H. 15778
Kubo, I. 7237
12326, 12327
Kubo, T. 3853, 3854
7545, 16785, 16786
Kuchel, C. C. 7471, 9822
Kuchinka, A. 17303
Kuckens, H. 2163
Kuckuck, H. 76
Kudo, R. R. 3265
Kuentzel, A. 12033
12034, 15031
Kugel, M. A. 11184
Kugler, H. 12574
Kuhl, W. 15065
Kuhlenbeck, H. 16974
Kuhlmann, A. G. 2943, 4698
Kühn, A. 5145
12470, 16200
Kuhn, L. R. 15272
Kuhn, O. 6778, 15943
Kuhn, R. 16924
Kuhne, E. R. 5396, 6960
Kühnelt, W. 9080, 10560
Kühner, R. 8398
Kuhnholzlordat, G. 15585
Kuhns, M. L. 14826
Kuipers, R. K. W. 3923
Kuizenga, M. H. 9328
Kükenthal, W. 5
Kulchar, G. V. 15273
Kulkarni, R. D. 5153
Kull, J. 16787
Kulp, W. L. 8242
Kumagai, T. 8678
Kumaris, J. 5931
Kumasawa, M. 11592
Kummer, H. 15854
Kündig, B. 4571
Kundu, B. 2787
Kunert, H. 8697
Kunert, B. L. 5520, 5522
2010, 2034
Kunio, K. 17304
Kunitz, M. 1894
7268, 7269, 7270
Kunkel, L. O. 7069, 15825
Kunkel, P. 242
5722, 11202, 13181
Kunstadter, R. H. 384, 9368
Künstler, W. E. 12722
Kuntz, A. 4297
Kuntz, W. A. 12155
Kunz, H. 3499
Kunz, R. M. 12965
Künzel, O. 3712
Künzler, H. 3083
Kuo, P. T. 13267
Kuo, Z. Y. 11443, 16643
Kupperman, H. S. 5631, 5640
Kurasawa, Y. 3223, 7354
Kuriaki, K. 13121
Kurand, A. A. 7547
Kurand, S. K. 7833
Kuroda, N. 16080, 16081
Kurosawa, T. 12754
Kurotschkin, T. J. 9900
9980, 15233
Kursanov, A. 3584
4950, 10331
Kurth, O. J. 4270
Kurtz, J. I. 4004
Kurtz, R. 4005
Kurylowicz, W. 870, 4470
Kurzik, L. 9648
Kurzik, R. 3975
Kusano, Y. 751
Kuschinsky, G. 14632, 14633
Kushner, H. F. 8954
9803, 15104
Kuske, E. 4601
Küster, E. 1068
Kusuno, M. 16345
Kusunoki, S. 8375
Kuvator, G. G. 2210
Kuwabara, T. 13665
Kuwada, Y. 1706, 16155
Kuzin, A. M. 5541
Kuznetsov, V. P. 2413
Kwan, S. T. 7841
Kwiatkowski, H. 12884
Kwit, N. T. 31154
Kyer, J. 648
Kyes, P. 11691
Kyllin, H. 4729
Kyogoku, K. 13021
Kyu, K. 13165
Kyu-Sui, C. 12806
Laake, E. W. 3200
8659, 12220
La Barre, J. 5770
Labate, J. S. 7840
Labes, K. 17370
Labitte, A. 8839
Labranca, G. 1559
LaBrand, V. 8952
Lacassagne, A. 5427, 12697
Lachaud, R. de 7955
Lachmann, E. 9677
Lack, D. 3434
14295, 18070
Lackey, G. F. 1482
Lackey, J. B. 136
993, 2792, 14399
Lackey, R. W. 13178
Lacorte, J. G. 9995
Lacour, M. 13103
Ladd, L. 16614
Ladeiro, J. M. 3299, 3300
Ladell, W. R. S. 5033
Ladiges, W. 6961, 8812
Laewen, A. 14888
LaFace, B. 8660
Lafay, B. 15088
Lafetra, M. 8264
Lafferty, C. R. 8247
Lafon, M. 9329
9330, 14530
Lafraita, E. 7278
Lagerlof, E. 16563
Lagerlof, N. 6091
Lagler, K. F. 14413
Lagneau, E. 15094
La Grutta, L. 8123
Lahiri, D. C. 871
Lahr, E. 872, 6067, 11542
LaHue, D. W. 10578
Laibach, F. 1558, 3080
Laidlaw, P. F. 9950
Laine, T. 15409
Laird, D. G. 2742
Laird, F. 12800A, 15992
Lakhovsky, G. 13209
Lakin, H. W. 2925
Lal, J. B. 12035
Lal, R. B. 6310
Lallemand, S. 15072, 15073
Lallemand, V. 6916
Lam, H. J. 1181
Lamare, J. P. 17164
Lamarre, L. 8322
Lamb, F. H. 7869
Lamb, H. H. 16238
Lamb, I. M. 1089
8412, 10116
Lamb, J. Jr. 15583
Lamb, M. 1090
Lambert, E. B. 6690, 10224
Lambert, E. H. 16731
Lambert, J. 16007
Lambert, R. 14226, 14227
Lamberts, 3024
Lambillon, J. 9422
Lambin, S. 16803
Lameere, A. 7070, 10689
Lamerson, P. G. 10386
10397, 10398, 10399
Lamiman, J. F. 3169
8176, 10393
LaMonte, F. R. 6965
Lamoureux, W. F. 2508
8093, 8955
Lamp, H. 7760
Lampman, C. E. 15127
Lamson, P. D. 13178, 16788
Lamy, M. 13279
Lanari, A. 11081
11231, 14725
Lancaster, H. M. 2944, 13820
Lancaster, S. 5970
Lancaster-Jones, E. 10707
Lancefield, R. C. 6057
Lanchester, H. P. 7795
Lanczos, A. 5771, 9331
Land, E. 6189
Landau, E. 10873
Landauer, E. 8315
8816, 10081
11718, 13680
Landauer, W. 12696
Landay, L. H. 17187
Lander, H. H. 11190
Landes, M. 16175
Landgrebe, F. W. 13059
Landis, C. 7621
Lands, A. M. 3943
1944, 13093
Landsberg, J. W. 15370
Landsteiner, K. 873
11543, 11544, 14440
Lane, C. B. 1059
Lane, C. E. 7975
Lane, C. R. 5488
Lane, J. 10490, 12370
Lane, M. C. 6877
Lan, R. Roberts, C. 7593
Lanford, O. S. 16447
Lanfranchi, F. 5894
Lang, A. 4209, 13210
Lang, A. L. 15536
Lang, E. H. 5780
Lang, E. S. 16668
Lang, E. M. S. 15482
Lang, J. L. 4851
Lang, W. D. 8742
Lange, A. 4833
Lange, A. C. 4594
Lange, C. J. 10494
Lange, H. 3246
Lange, N. A. 12492
Lange, T. 17548
Langacker, H. 4130
Langendorf, R. 14764
Langendorff, H. 7282
Langendorff, M. 7282
Langeron, M. 970
3247, 4641
Langford, G. S. 12208
Langhus, W. 8340
Langlet, J. 5993
Langlykke, A. F. 11770
Langner, P. H. Jr. 6068, 17163
Langston, J. M. 14118
Langston, W. C. 311
Langstroth, G. O. 12967, 14634
Langworthy, O. R. 456
5695, 9490, 12643
14726, 14747, 16593
Lanham, W. B. Jr. 2011
Lanier, R. R. Jr. 5964
Lantelmé, W. 8937
Lanton, D. C. 1293
Lanuza, E. A. 11979
11980, 17631
Lanza, A. J. 13280
Lanzing, J. C. 3585
Lapalucci, L. 13621
La Parola, G. 1687A
Lapicque, L. 14727
14728, 16717
Lapicque, M. 14728
Lapides, J. 12643
Lapière, S. 1317
Laporta, M. 7278
Laqueur, E. 14440
Laqueur, G. 3570
Larabi, M. 974

- Large, J. R., 1457, 3145
 Larget, M., 17164
 Larimer, R. N., 15234
 Larisey, M. M., 17581
 La Rivers, I., 8772
 Larkey, S. V., 32
 Larmer, F. G., 6477
 Larose, P., 2497, 13853
 La Rotonda, C., 3046
 Larrabee, M. G., 12643
 Larsell, O., 13288
 Larsen, C. S., 5321
 Larsen, R. M., 16914
 Larsen, E., 6767, 13178
 Larson, E. W., 14537
 Larson, H. W. E., 8468
 Larson, P. S., 3943
 Larson, R. H., 14497
 Larson, R. H., 1452
 Larson, W. P., 9928
 Larson, W. P., 13178
 Larson, H., 7512
 Larsson, S. G., 10598
 Lascano-González, J. M., 5632
 Laseur, H., 11462
 Lashley, K. S., 4329
 Laskaris, T., 3169
 Laskowski, M., 3855
 Lasnik, A., 16862
 Lassek, A. M., 682, 4330
 Lassen, H., 10674
 Lassen, H. O. A., 3856
 Lassetter, R., 14388
 Lasseur, P., 14328, 14329
 Last, J. H., 16808
 Latate, C., 16865
 Latham, D. H., 3169
 Lathrop, A. W., 11472
 Lathrop, G. H., 9605
 Latimer, L. P., 11995A, 13891
 Latimer, W. J., 1223, 17618
 Latta, J. R., 2976
 Latta, R., 10412, 12196
 Lattin, G. de, 5126, 12328
 Latven, A. R., 4131
 Lauber, H. J., 331
 Lauber, H. J., 11291, 13211
 Laubereau, O., 17725
 Laubert, R., 12123
 Lauder milk, J. D., 7048
 Landon, L. R., 8756
 Laursen, F., 3586, 7305
 Lauffer, M. A., 1438
 Lauffer, M. A., 3125, 15826, 17792
 Lang, E. P., 3701
 Lang, E. P., 3703, 4106
 Lang, E. P., 4132, 11363
 Laughton, F. S., 1688, 3025
 Laurent, J., 10116
 Laurent, P., 8650, 14273
 Laurie, A., 6516, 11981
 Laurie, M. V., 10255
 Laurie, M. V., 10256, 10257, 12005
 Laurila, V., 13821
 Lauritsen, C. C., 16391
 Lauritzen, J. L., 17578, 17586
 Lauson, H. D., 5633
 Lauson, H. D., 5634, 12643, 16618
 Laustsen, O., 17501
 Lautsch, W., 17724
 Lavaditi, C., 9929
 Laval, J., 14868
 Laval, P., 13394
 Laverne, H., 12876
 Lavier, G., 1057, 2862
 Lavin, G. I., 14463
 Lavin, G. I., 15840, 16847, 17783
 Lavitry, Mlle., 13131
 Lavoin, J., 14827
 Lavrinenko, N., 1548
 Law, L. W., 5344, 7149
 Lawkovic, W., 8190, 8199
 Lawler, H. J., 6793
 Lawley, D. N., 1813, 8970
 Lawrence, A. O., 17653
 Lawrence, C. A., 17461
 Lawrence, C. H., 4234
 Lawrence, D. A., 8218
 Lawrence, D. B., 9021
 Lawrence, E. O., 7069, 10991
 Lawrence, J. C., 10727
 Lawrence, J. H., 9171
 Lawrence, J. H., 11332, 16321
 Lawrence, J. S., 16900
 Lawrence, R. D., 2660
 Lawrence, R. F., 3320
 Lawrence, R. F., 10579, 10580
 Lawrence, W. J. C., 1404
 Lawrenz, M., 14545, 14546
 Lawson, C. A., 9789
 Lawson, G. M., 9865
 Lawson, H., 9637, 12643
 Lawson, H., 12954, 16699, 16734
 Lawson, J., 927
 Lawson, W., 16596
 Lawton, J. H. T., 10975
 Lawyer, L. O., 17843
 Lay, D. W., 1880
 Lay, D. W., 5219, 5236
 Layton, M. H., 2974, 17618
 Lazarus, A. S., 15235
 Lazarus, A. S., 15237
 Lazarus, D. S., 9839
 Lazari, J. H., 17165
 Lazzerini, G., 16874
 Lea, C. H., 10049, 10050
 Lea, C. H., 10051, 10986, 17404
 Lea, E., 1866
 Lea, G. F., 2952
 Leach, E. H., 714, 715
 Leach, E. P., 14296
 Leach, J. G., 6670, 15889
 Leach, L. D., 1482
 Leach, L. D., 3169, 10343
 Leader, G., 7231
 Leadingham, R. S., 9969
 Leake, C. D., 13178
 Leandri, J., 1132
 Lease, E. J., 2058
 Lease, E. J., 3716, 3717
 Lease, J. G., 2058, 3717
 Leasure, E. E., 10512, 15975
 Leatham, J. H., 3917
 Leatham, J. H., 9332, 16633, 16993
 Leathers, W. S., 5093
 Leathers, W. S., 6742, 6746
 LeBeau, F., 6694
 Lebedeff, G. A., 94
 Lebedkin, S., 3439
 Leblanc, F. J., 16789
 Leblond, C. P., 5475, 14579
 Lebon, J., 12657, 14931
 Lebour, M. V., 3301
 Le Brun, P., 11906
 Lechner, R., 1929
 Le Chuiton, F., 13605
 LeClerg, E. L., 6671
 LeClerg, E. L., 12562, 15855, 17752
 Leeroart, D., 10486
 Leddy, E. T., 17172
 Leder mann, W., 8971
 Ledingham, A. E., 12039
 Ledingham, G. A., 15454
 Ledingham, G. F., 1749
 Lee, C., 17100
 Lee, C. D., 11741, 11742
 Lee, C. E., 17098, 17099
 Lee, C. O., 349, 16789
 Lee, F. C., 1995
 Lee, K. H., 9093, 16460
 Lee, L. Y., 11079
 Lee, P., 1963
 Lee, R. C., 275, 276, 277
 Lee, R. C., 3543, 5213, 7410
 Lee, S. B., 8353
 Lee, W. Y., 3081
 Leef, J. S., 8455
 Leene, J. E., 6848
 Leeper, G. W., 1218
 Lees, H., 16538
 Lees, R. H., 7010
 Leeson, H. S., 14252
 Leete, H. M., 4471
 Lefebvre, C. L., 3169
 Lefebvre, C. L., 10344, 10345
 Lefebvre, C. L., 15889, 17753
 Lefèvre, J., 16156
 Lefèvre, M. L., 4350
 Lefkowitz, W., 5908
 Legczynski, S., 13567
 Leggett, C. W., 17587
 Legge, J. W., 16416
 Legler, F., 9022
 Lehker, G. E., 12171
 Lehman, A. J., 7779
 Lehman, G., 8890
 Lehman, R. A., 516, 7293
 Lehman, S. G., 1481
 Lehmann, E., 16176, 16177
 Lehmann, F. E., 15081
 Lehmann, G., 509, 2316
 Lehmann, G., 7749, 9554, 16317
 Lehmann, H. C., 15903
 Lehmann, J., 12723
 Lehmann, J., 13268, 14943
 Lehmann, W., 2123
 Lei, T. O., 6643
 Leibowitz, J., 332, 333
 Leifer, L., 15153
 Leigh, E. K., 6550
 Leighton, A., 11498
 Leikind, M. C., 13702
 Leins, F., 9624
 Leiper, J. W. G., 1604, 6743
 Leith, E., 7088
 Leithner, A. J., 4232
 Leithner, J., 15443, 16157
 Leitner, S. J., 874
 Leitz-Waldschmidt, E., 7271
 Lele, S. H., 5153
 Lelu, P., 3857
 Leluszachowicz, Z., 18001
 LeMasurier, H. E., 6020
 Lembcke, P. A., 6212
 Lemberg, B., 2895
 Lemberg, R., 14578, 16416
 Lemetayer, 2229
 Lemon, E. C., 6216
 Lemon, J. M., 2011
 Lemser, H., 10743
 Lendle, L., 5772
 Lengerken, H. v., 10594
 Lengyel, B. A., 3665
 Lenkeit, W., 15094
 Lennette, E. H., 9081, 11615, 11617
 Lennette, E. H., 12649, 13449, 15247
 Lennon, H. S., 4256
 Lennox, F. G., 2490
 Lenoir, M., 3410
 Lent, H., 17956
 Lenti, C., 5458
 Lenti, P., 5459, 5460, 5593
 Lenti, P., 2410
 Lentzen, J., 17169
 León, A. P., 4186
 León, L. A., 14192
 Leonard, A. B., 17239
 Leonard, E. C., 2864
 Leonard, E. R., 6603
 Leonard, J. W., 7238
 Leonard, O. A., 10800, 14414, 17390
 Leonard, O. A., 12089, 17720
 Leonard, S. L., 12968, 14635
 Leonard, W. H., 3477
 Leonardo, D., 6551
 Leone, P., 11321
 Leonian, L. H., 14003
 Leopold, A., 5230, 5420
 Lepeschkin, W. W., 12687
 Lepesme, P., 10450
 Lepetit, G., 7355
 Lepkovsky, S., 4245
 Lepley, W. M., 2179
 Lepper, R. Jr., 5324, 8938
 Leraas, H. J., 8866, 10664
 Lerche, E., 12755, 16417
 Le Riche, H., 9580, 17020
 Leriche, R., 11692
 Lerman, J., 9651
 Lerner, I. M., 95, 2050
 Lerner, I. M., 2051, 4380, 6025
 Lerner, I. M., 15126, 17101, 17102
 Le Roux, G., 13593
 Leroux, R., 2362, 11318
 Leroy, 2219
 Lesboursies, 2700
 Lesh, F. R., 1219
 Lesh, J. B., 15738
 Leshchenko, G. D., 3990
 Leshchinslars, R. L., 10062
 Lesley, J. W., 1750, 8939
 Lesley, M., 8939
 Leslie, A., 16737
 Leslie, P. H., 12575
 Lesne, P., 3328
 Lesne, P., 6878, 6879
 Lesses, M. F., 14829
 Lester, H. M. O., 8698, 15962
 Lestrangle, Y. de, 13143
 Lesuk, A., 2775
 Lesure, A., 352
 Leszczynski, R. J., 5773
 Leusden, F. P., 15315, 16451
 Leussler, R. A., 8793, 12395
 Leuth, H. C., 2317
 Leuthardt, F., 7420
 Leutritz, J. Jr., 17837
 Levaditi, C., 2620, 6142
 Levaditi, C., 13450, 13568, 13569
 Levaditi, C., 13570, 15238, 17262
 Levadoux, L., 8927
 Levan, A., 14347
 Levan, A., 14360, 14363
 Le Van-Sen, 13450
 Leven, 13568, 13569
 Levene, H. M., 16613
 Levene, P. A., 1896
 Levengood, C. A., 7611
 Levenstein, I., 12511, 13304
 Leverton, W. R., 14765
 Levi, G., 2470
 Levi, H. B., 5958
 Levie, B., 10860
 Levie, L. H., 9305
 Levie, L. H., 9333, 11063
 Levin, A., 7065
 Levin, B. S., 17305
 Levin, C. M., 14828
 Levin, L., 3913
 Levin, M., 12643
 Levin, N., 6143
 Levin, P. M., 1790
 Levina, E. D., 17632
 Levine, B. S., 9866
 Levine, L., 11859
 Levine, M., 2789, 6266
 Levine, M., 9925, 9928, 10364
 Levine, M., 11574, 11593, 13178
 Levine, N. D., 5261, 6717
 Levine, P., 13523, 17234
 Levine, P. F., 1560
 Levine, R., 3249, 8720, 15200
 Levine, R., 2128, 3690, 7856
 Levine, R., 9334, 12643, 16490
 Levine, S. A., 11170, 11195
 Levine, S. Z., 7414
 Levine, V. E., 426
 Levinson, B., 12643
 Levinson, S. O., 11545, 11546
 Levit, S. G., 5354
 Leviton, A., 11498
 Levitt, J., 15773
 Levitt, R. O., 17213
 Levring, T., 2793
 Levvy, G. A., 7780
 Levy, R., 9271
 Levy, R. L., 4083
 Levy, S. E., 7320
 Levy, S. E., 7708, 11166
 Levy-Wolff, L., 13065
 Lew, W., 7598
 Lewin, A., 3555
 Lewinson, M. S., 5558
 Lewis, A. A., 2124, 9335
 Lewis, A. D., 16239
 Lewis, A. H., 15873
 Lewis, F., 18071
 Lewis, G. C., 5237
 Lewis, G. E., 1655
 Lewis, G. E., 5238, 8865
 Lewis, H. B., 2024
 Lewis, H. B., 3702, 5538
 Lewis, H. F., 5421
 Lewis, J. B., 11907
 Lewis, J. B., 11908, 13771
 Lewis, J. M., 1126, 12861
 Lewis, J. T., 7781
 Lewis, J. T., 9336, 9337
 Lewis, K. H., 17462
 Lewis, L. A., 9313, 12643
 Lewis, M., 2656, 4556, 7764
 Lewis, M., 9921, 13238, 13537
 Lewis, M. D., 15180
 Lewis, M. R., 537, 590
 Lewis, O. C., 11960
 Lewis, R. A., 334
 Lewis, R. W., 11013
 Lewis, W. H., 16863
 Lewis, W. R., 1023
 Lewit, K., 4130
 Lewson, A. C., 16907
 Lewy, F. H., 16941
 Lex, K. K., 12796
 Ley, A., 1791
 Leyda, F. A., 5497
 Leyton, G., 2229
 Lhermitte, 12246
 Lhoste, J., 6880, 14246
 Li, H. C., 317
 Li, L. Y., 6643
 Li, R. C., 2441
 Li, S. L., 3081
 Li, S. Y., 1792
 Li, T. H., 11078
 Li, T. H., 11079, 13074
 Lia, C., 6551
 Liaci, L., 7857
 Libby, R. L., 17167
 Liber, A., 2688
 Liberson, W., 2016, 2251
 Libet, B., 5696, 12843
 Liebowitz, H., 12883
 Lichtenberg, H. L., 563
 Lichtenstein, L., 12688
 Lichtig, I., 7090
 Lichtman, A. L., 12643
 Licklider, J. R., 3980
 Lid, J., 8424
 Liddell, H. S., 7088
 Liddle, S., 17371
 Lidl, O., 17654
 Lieb, C. W., 9073, 17326
 Liebigott, G., 13240
 Lieberman, A., 4067
 Liebknecht, W., 16714
 Liebscher, W., 5994, 6021
 Liechtenstein, G. P., 6285
 Liechi, A., 1907, 15420
 Liedholm, K., 7358, 9272
 Liedmann, A., 4111
 Lieneman, C., 6346
 Liepins, R., 15653
 Liesche, W., 3266
 Lieu, V. T., 10509
 Lieure, C., 8048
 Light, F. W. Jr., 16864
 Light, R. F., 5565
 Lightbody, H. D., 3558, 12896
 Lightfoot, C. C., 248
 Liljestrand, G., 2318
 Lilje, 7715, 11185
 Lilleengen, K., 4417
 Lillick, L. C., 135
 Lillie, F. R., 699
 Lillie, R. D., 10912
 Lillie, R. D., 1663
 Lilly, V. C., 14003
 Lim, R. K. S., 3800
 Lim, R. K. S., 11077, 11078
 Lim, R. K. S., 11079, 13009
 Lima, A. de C., 12371
 Lima, C., 6029
 Lima, J. F., 1249
 Lima, J. F., 7993
 Limarzi, L. R., 12006
 Limay, V. D., 12006
 Limber, D. P., 17769
 Lin, C. K., 251
 Lin, C. Y., 12650, 12790
 Lin, K. H., 15805, 17724
 Lin, P. C., 8315, 8316
 Lin, P. C., 10031, 11718, 13660
 Lincicome, D. R., 12296
 Lincicome, D. R., 15971, 17895
 Lincoln, A. Jr., 5230
 Lincoln, C., 4779
 Lincoln, F. C., 16082
 Lincoln, N. S., 16887
 Lindau, A., 2363
 Lindau, H., 933, 4535
 Lindauer, M. A., 2318
 Lindberg, A. A., 4020
 Lindberg, A. L., 264
 Lindberg, D. O. N., 13645
 Lindberg, H. A., 15316, 15317
 Lindberg, J. G., 9479
 Lindberg, K., 8757
 Lindbergh, C. A., 14490
 Lindblad, O., 8539
 Linde, J. I., 17168
 Linde, J. I., 12078
 Lindeberg, G., 7514
 Lindgren, C. C., 2621
 Lindgren, C. C., 4902, 5289
 Lindgren, C. C., 11818, 17257
 Lindgren, G., 1751
 Lindeman, V. F., 7662
 Lindenberg, A., 10847

- Linder, D. H.,...17491
 Linderström-Lang, K.,
 196, 716, 14440
 Lindgren, L. F.,...17467
 Lindhard, J.,...13087
 Lindinger, L.,...6417
 Linder, E.,...5185
 7716, 1182, 12643
 Linder, R. C.,...10303
 Lindner, W., 9555, 9556
 Lindquist, A. W., 15918
 Lindquist, B.,...5388
 7203, 16259
 Lindquist, T.,...5554
 Lindsay, E.,...12287
 Lindsey, A. A.,
 7049, 18072
 Linskog, G. E.,...5606
 Linsley, C. H.,...15182
 Linstedt, A.,...11805
 Lindtner, V.,...8399
 Linegar, C. R.,...7769
 7782, 13178
 Linell, E. A.,
 7827, 13246
 Lines, E. W.,...3782
 Lines, K. W.,
 11499, 13679
 Linford, M. B.,
 15874, 17770
 Linhard, J.,...7687
 Livingston, S.,...9649
 Link, G. K.,...3061
 3167, 8169
 Link, R. P.,...15975
 Link, T.,...875
 Linksz, A.,...457
 Linnæi, C.,...14337
 Linnell, W. H.,
 9930, 14453
 Linnemann, H.,...12969
 Linnemann, W.,...12797
 Lins de Almeida, J.,
 17956
 Linser, H.,...15711
 Linser, E. G.,...8881
 8763, 8773
 Linsley, E. G.,...8651
 Linton, R. R.,...4084
 Linton, R. W.,...1058
 Lipetz, B.,...655, 12643
 Lipman, E.,...12643
 Lipp, J.,...17337
 Lippelt, H.,...4547
 Lippens, L., 5181, 16033
 Lippincott, S. W., 2365
 2429, 5891, 9666
 Lippmaa, T.,...3415
 Lipschitz, W. L.,
 12782, 13178
 Lipschütz, A.,...12970
 14866, 14892, 16865
 Lisa, J. R., 13122, 16931
 Lisitsa, F.,...4298
 Lisitsyn, D. I.,...8583
 Liss, L.,...8949
 Liss, M. M.,...15153
 Lissak, K.,...7554
 Lissak, K., 4138, 4472
 7552, 12643, 14658
 Lissner, H., 5860, 14956
 Lissmann, H. W.,
 8602, 4044
 List, G. M., 8993, 6984
 Lister, M. D.,...14297
 Litarde, R. de, ...1102
 Litchfield, J. T. Jr.,
 18178
 Lits, F. J.,...591
 Litschauer, V.,...17492
 Littauer, D.,...11186
 Little, C. C.,...6882
 Little, E. L. Jr.,...8506
 4750, 5219
 Little, M. H.,...8920
 Little, P. A.,...676
 Little, R. B.,...1016
 11797, 15371, 15372
 Littlejohns, R. T.,
 16084
 Littler, J. W.,...15989
 Littwin, R. J.,...6308
 Litvak, L. B.,
 3890, 4048
 Litwiller, R.,...657, 658
 Litzka, G.,...7843
 Liu, H. C.,...14517
 Liu, P. Y.,...8215
 Liu, S. C., 8124, 8125
 18451, 18452, 19453
 Liu, S. H.,...12971
 Liu, W. T.,...1023
 10024, 10990, 14669
 Liun, R.,...7515
 7516, 7517, 16564
 Livadas, G.,...6144
 Livanov, M. N.,...2230
 Livermore, J. R., 15554
 Livesey, R. J.,...14610
 Liverato, S.,...6213
 Liveratos, S. S.,...9649
 Livingston, A. E., 13178
 Livingston, B. E.,...1383
 Livingston, S.,
 924, 8161
 Llewellyn-Jones, M., 832
 Lloyd, D. J.,...1883
 Lloyd, D. K.,...8265
 Lloyd, D. P. C.,...12643
 13080, 13081
 Lloyd, J. W.,
 11982, 17588
 Lloyd, O.,...2344
 Lloyd, J.,...5435
 Locatelli, V. H.,...4210
 Lochhead, A. G.,...2743
 10047, 11763
 Lockman, C.,...5088
 Locke, A.,...6070
 6071, 6072, 11547
 Locke, S. B.,...3169
 Lockhart, E. E.,...10855
 Lockhead, M. S., 16877
 Lockwood, J. E.,
 11225, 16413
 Lockwood, J. S.,
 13547, 17263
 Lockwood, L. B., 11773
 Lockwood, W. H., 16416
 Lodberg, C. V.,...3472
 Lodder, J.,...4642
 Lodge, F.,...2945
 Loeb, L.,...592
 5627, 14996, 16619
 Loebing, J.,...7256
 Loefler, J. B.,...7253
 Loehner, C. A.,...3858
 Loehwing, W. F.,...6658
 Loeper, M., 852, 11819
 Loesch, J., 14893, 15284
 Loesche, H. W. v.,
 18970
 Loesener, T.,...15504
 Loesser, A., 3829, 8859
 4276, 9279, 9338
 11102, 12332, 16607
 Loewinger, H.,...3991
 Loew, E. R.,
 2103, 11032
 Loewe, S.,...13178
 Loewenberg, S. A.,
 16915
 Loewenthal, H.,...4474
 4475, 4569
 Loewenthal, L. J. A.,
 12256, 14321
 Loewy, A.,...16240
 Löffler, W.,...15201
 Löfvendahl, H.,...7914
 Logan, M. A.,
 7688, 9339
 Logan, W. A.,...13692
 Logemann, W.,...3844
 Logsdon, C. D.,...11743
 Lohammar, G.,...7229
 Lohman, K. E.,...8371
 Lohman, M. L., 11819
 Lohmender, H.,...5118
 Löhr, H.,...5239
 Lohwag, H., 8400, 8401
 Lohwag, K.,
 3110, 17493
 Loiseleur, J.,
 6078, 13454
 Loman, J.,...14829
 Lombroso, C.,...10970
 Lominski, I.,
 8200, 13571
 Lommel, G. W. v., 9340
 Lomborg, A.,...6065
 London, McK.,...15148
 Long, A. P.,...15818
 Long, C.,...232
 Long, C. N. H.,...5542
 5645, 12643
 Long, E. R.,...13241
 Long, H. F.,...2735
 2736, 17414
 Long, J. A.,...5950
 Long, J. H.,...15762
 Long, M. B.,...12643
 Long, M. L.,...4269
 Long, P. H., 2293, 2654
 2661, 4549, 9914
 Long, R. S.,...1217
 Long, W. L.,...6074
 Long, W. S.,...5222
 Longenecker, H. E.,
 10987, 12821
 16493, 16531, 16538
 Longfield, C.,...12406
 Longley, B. J.,
 13178, 14826, 15963
 Longmire, W. P. Jr.,
 2345
 Longnecker, T. C.,
 10206
 Lonstein, L.,...7683
 Looby, W. J.,
 11915, 11921
 Loofbourou, J. R., 1059
 1060, 1359, 3062
 Lookeren Campagne,
 G. J. v.,...1975
 Loomis, A. L.,...5890
 12643, 16890
 Loomis, E.,...380
 Loomis, E. F.,
 5124, 13746
 Loomis, N. H.,...1250
 Loomis, W. E.,...1373
 10176, 10341
 Looney, J. M.,...1930
 10946, 12798, 16939
 Loosanoff, V. L.,...9055
 Loosli, C. G.,...15192
 Lopez, F. R.,...17589
 Loppenthin, B.,...16085
 Lorber, V., 7864, 12922
 Lord, F. T.,...10489
 Lord, J. W. Jr., 16418
 Lorenz, F. W.,...3897
 3899, 15118
 Lorenz, M.,...12643
 Lorenz, W.,...6286
 Loreti, F., 2447, 4352
 Loretti, G. A.,
 1540, 15192
 Loring, H. S.,...1438
 3126, 17783, 17784
 Loth, E.,...5932
 Lötsch, H.,...6045
 Lotspeich, E.,...13483
 Lott, H. J.,...8436
 Lott, W. A.,...9557
 Loubatières, A., 14962
 Loughane, D. B., 11046
 Loughane, J. B.,
 8609, 8611
 Loughry, F. G.,...2971
 Loukashkin, A. S., 7050
 Louria, H. W.,...5858
 Louria, M. R.,
 5858, 11187
 Lous, P.,...14444
 Loustalot, A. J., 14030
 Love, J. G.,...7679
 Love, R. M.,...43
 Lovell, J. J.,...14008
 Lovern, J.,...7445
 10052, 11000
 11001, 11002
 Lovett, H. C.,...1481
 Loving, W. L.,
 8360, 9968
 Low, M.,...16455
 Lowe, C. van R., 9745
 Löwe, H., 11473, 12552
 Lowe, J.,...6053
 8126, 17372, 17373
 Lowe, J. T.,...3741
 Lowe, P. R.,...18073
 Lowe, T. E.,...14766
 Lowell, F. C.,...11586
 Löwenbach, H.,...14729
 Löwenberg, K.,...16942
 Lowndes, A. G.,...3523
 Lowrie, W. L.,...4274
 Loy, D. T.,...6075
 Lu, G. D.,...7806, 7692
 Lu, Y.-M.,...18800
 11082, 13609
 Lubinska, L.,
 7777, 18094
 Lucam, M.,...15976
 Lucas, A. M.,...13579
 Lucas, C. C.,...4801
 8177, 8182
 Lucas, C. E.,...5891
 Lucas, C. R.,...14415
 Lucas, E. G.,...2320
 Lucas, M. A.,...7938
 Luce-Clausen, E. M.,
 9170
 Lucia, S. P.,...8641
 Luciano, F. A., 14828
 Lucie, H.,...6076
 Luck, J. M.,...7244
 14440, 16379
 Luck, B.,...538, 2364
 14894, 14895, 16303
 Lucke, H.,...2035
 Luckert, J. T.,...15997
 Luckhoff, C.,...16418
 Luckner, H.,...14597
 Lucco, J. V., 4134, 9501
 9503, 11081, 12643
 Ludany, G. v.,
 2638, 3642, 3760
 4461, 4476, 7859
 Lüdecke, H.,...4832
 Lüdi, W.,...7204
 7214, 17549
 Ludueña, F. F.,...7753
 Ludvig, E.,...2211
 Ludvig, C.,...2196
 Ludwig, C. A.,...8343
 Ludwig, D.,...8057
 Ludwig, W.,...8058
 12500, 12807, 14341
 Lueken, B., 491, 13123
 Luft, R.,...14636
 Lugg, J. W. H.,...3783
 6607, 6608
 8589, 14021
 Lührs, E.,...4677, 9867
 Luisada, A.,...14767
 Luisier, A.,...11839
 11840, 11841
 Lukens, F. D. W.,
 5616, 12643
 Lukens, M.,
 11650, 11651
 Lukkala, O. J.,...15659
 Lullies, H.,...3606
 Lumer, H., 16497, 17021
 Lumsden, D. V., 13892
 Lumsden, L. L.,...8127
 Lumsden, T.,...16866
 Luna, N.,...4494
 Lund, H.,...7807
 Lund, S.,...11806
 Lundán, G. v.,...279
 Lundberg, S.,...2382
 Lunde, G., 5550, 12844
 Lundegård, H., 15759
 Lundgren, C. C., 1751
 Lundell, C. L.,
 4785, 10294
 Lundgren, N.,...2370
 Lundgren, R.,...2272
 Lundholm, I.,
 2396, 13258
 Lundman, B.,...17022
 Lundman, B. J.,
 5933, 17023
 Lundsgaard, E.,...2001
 2258, 2259, 10913
 Lundsteen, E.,...4135
 Lundy, C. J.,...4085
 Lungren, E. A.,...12157
 Lunn, W. M.,...1456
 Lunsford, W. F., 11649
 Lupe, I.,...13772
 Lurie, M. B., 8128, 8129
 Lush, D.,...8104
 9868, 9942, 9943
 Lush, J. L.,...8956
 12553, 15108
 Lute, A. M.,...17743
 Lutherman, C. Z., 16249
 Lüthi, H. R.,...9773
 Lutkov, A. N.,...16178
 Luttermoser, G. W.,
 17898
 Luttkus, K.,...13976
 Lutz, J. F.,...12643
 Lutz, J. M.,...1250
 8496, 13893
 Lutzmann, H.,...12665
 Luyet, B. J.,
 1401, 1402, 1903
 2164, 3087, 12643
 Luyten, L.,...10217
 Luz, C. G. da.,...14333
 Luzzatto, G.,...13773
 L'Vov, S. D.,...23
 Lwoff, A.,...1582
 10085, 16365, 16518
 Lyall, A.,...12897
 Lyall, H. W.,...6077
 Lydenberg, H. M.,...24
 Lyford, W. H.,...17618
 Lyle, C.,...5059
 Lyle, E. W.,...1470
 Lyman, C. M.,...1909
 Lyman, C. P.,...12449
 Lyman, R. S.,...7841
 Lynch, E. R.,...9994
 Lynch, H. M.,...17263
 Lyng, B.,...17504
 Lynn, W. G.,...10627
 Lyon, B. M.,...15255
 Lyon, C. J.,...4958
 Lyon, G. M.,...1656
 Lyon, M. W. Jr., 12450
 Lyon, R. A., 7594, 17264
 Lyons, B. F.,...12643
 Lyons, M.,...11511
 Lyons, R. H.,
 4086, 16419
 Lyons, W. R.,
 2129, 16591
 Lysholm, E.,
 7715, 11185
 Lyth, R.,...16886
 Lythgoe, R. J.,...2212
 M
 Maaden, H. v. d., 10533
 Maas, J. A., 1976, 14598
 Maaske, C. A.,...445
 11240, 12643
 16304, 16576
 Maassen, W.,...9869
 Mabesa, C.,...17655
 McAdams, J. C., 15239
 McAllister, E. D., 14009
 McAllister, F. F.,
 252, 12643
 Macan, T. T.,...18006
 Macapagal, W. V., 1043
 Macara, T., 2723, 2727
 McArthur, J.,...5258
 McAtee, W. L.,...3537
 5422, 8886
 9069, 16287
 McAulay, A. L.,...16179
 McAuliffe, H. D.,...6287
 McBain, J. W.,...5497
 McBeth, C. W.,...17771
 MacBeth, J. J.,
 8794, 8795
 Macbride, J. F.,...2865
 McBride, J. F.,...2865
 McBride, W. P. L.,
 16850
 MacBryde, C. M.,...7546
 McBryde, M.,...15891
 McCahey, J. F.,
 12992, 16620
 McCall, R.,...10195
 McCalla, T. G.,...4912
 McCallan, S. E. A.,
 2169, 15882
 MacCallum, D. B., 13294
 MacCallum, F. C., 2615
 6197, 15154
 15223, 15360
 McCampbell, C. W.,
 9804, 15095
 McCance, R. A.,
 265, 308, 6823
 6824, 7568, 10993
 McCandlish, A. C., 9805
 9806, 9818, 11495
 McCann, L. J.,...5423
 McCarell, J. D.,
 9153, 13124
 McCarter, J.,
 9870, 11639
 McCarthy, E. F., 10914
 McCarthy, J. F.,
 10856, 12109
 McCartney, D. H.,
 12643
 McCarty, M.,...17255
 McCarty, W. C. Sr.,
 16867
 McCaughan, J. M.,
 10915
 McCausland, A. M.,
 11108
 McCay, C. M.,...14554
 14555, 16466
 McChesney, E. W.,
 12643
 McClain, J. A.,...5951
 McClary, C. F.,...11744
 MacClement, W. D.,
 1438
 McClendon, J. F.,...214
 5635, 9154, 9423
 McClintock, B.,...10717
 McClung, C. E.,...8903
 McClung, L. S.,...2767
 6257, 10086
 McClure, F. J.,...15297
 McClure, W. B.,...4477
 Maccollini, R.,...2550
 4478, 13606
 MacColl, W. A.,...13544
 McCollum, E. V.,...4186
 5519, 5563, 7403
 12783, 16445, 16501
 McCollum, J. P., 11982
 McComas, E. W.,...2491
 McComb, S. J.,...12465
 McConaha, M.,...11842
 McConnell, C. H., 8779
 8727, 8728, 11463
 McConnell, K. P., 9813
 McCool, M. M.,...13822
 McCoord, A. B.,...16556

- McCord, C. P., 10916
McCord, F., 7622, 9444
McCord, W. M., 11205
McCormick, F. A., 10346
MacCorquodale, D. W., 3927, 3928, 7315, 9245, 12870, 12871, 16549
McCouch, G. P., 12643
McCown, M., 6679
McCoy, E., 2767, 8357, 10086, 10091
McCoy, S., 12592
McCoy, T. N., 1103
McCready, E. Jr., 735
McCrea, A., 11647
McCrea, F. D., 12643
MacCreary, D., 12221
MacCreary, O. C., 15096
McCrary, S. A., 3214
McCullagh, D. R., 3860, 9341, 14637
McCullagh, E. P., 14968
McCulloch, W. E., 7205
McCulloch, W. S., 4013, 7664, 12643, 14716
McCullough, A. W., 432
McCullough, N. B., 14638
McCunn, J. C., 15002
McCurdy, M. B. D., 11426
McCutcheon, M., 5819, 13407
McDaniel, E. I., 8652
McDaniel, L. E., 6311
McDaniel, W. S., 14942
MacDaniels, L. H., 14094
MacDonald, A. D., 298
MacDonald, A. M., 5636
MacDonald, C. C., 971
MacDonald, C. H., 4087, 16724
Macdonald, G., 11320, 12222
Macdonald, J. A., 6631
Macdonald, J. G., 15004
Macdonald, J. R., 5812, 7579, 14748
Macdonald, M., 3536
Macdonald, R., 2865, 15261
Macdonald, R. A. S., 2701
MacDonald, R. St. J., 11693
MacDonald, S. Jr., 594, 2366, 9589
MacDonnell, J. N., 4660
MacDonogh, R. S., 12576
MacDonough, F. K., 2218, 7411, 14709
MacDougall, R. T., 9028
MacDougall, R. S., 16111
MacDougall, W., 3440, 3441
MacDowall, F. H., 13373
MacDowall, R. K., 4834
MacDunnough, J., 3356
McDunne, J. W., 16332
McElvain, S. M., 11260
McEuen, 14644
McEuen, C. S., 595, 5813
MacEwan, J. W. G., 8000
McEwan, M. R., 13314
McEwan, A. D., 11745, 15172
McEwen, E. G., 2138, 12643
McEwen, H. D., 3742
McFadden, E. S., 14083, 15856
McFadden, G. H., 4698
MacFarland, J., 17590
MacFarland, J., 17374
MacFarland, R. A., 11184, 13056
MacFarlane, E. W. E., 5934
Macfarlane, M. G., 15763
Macfarlane, P. R. C., 9056, 9059
McFarlane, W. D., 218, 12835
MacFarlane, W. V., 17937
McFetters, J. W., 3473
Macfie, J. W. S., 12494
McGarr, R. L., 5026
McGarrity, J., 4471
McGee, A. J., 14944
McGeorge, W. T., 2969, 15608
McGill, J. N., 14298
MacGinitie, G. E., 9002, 12628, 14286, 17965
McGinty, D. A., 14638, 14651
McGirr, J. L., 9159
McGivney, Sister M. V., 6390
M'Gonigle, R. H., 9044
McGovern, T., 5850
McGowan, J. C., 6618
McGrath, J. F., 11299
Macgregor, A. R., 8244
MacGregor, D. F., 14830, 14831
McGregor, S. E., 1538
McGuire, G., 3564, 10877
McGuire, J., 7717
Machacek, J. E., 3169, 12124
Macheboeuf, M., 14177
Machella, T. E., 9666, 15202
McHenry, E. W., 2285, 3724, 9231, 10954, 11014
Machle, W., 9669
Machle, W. E., 7928
Macht, D. I., 12643, 13166, 16322
Macht, M. B., 12643
McHugh, J. L., 5400
Maciari, A., 215, 216
McIlwain, H., 4479, 8361
McIndoo, N. E., 16965
MacInnes, D. A., 3547, 5425
McInteer, B. B., 4730, 11807
McIntosh, A., 15985
McIntosh, F. O., 17938, 17939, 17940
McIntosh, F. O., 16642
McIntosh, J. F., 6145, 7842
McIntosh, T. P., 1953
McIntyre, A. R., 3720, 8725, 12643, 13178
McJunkin, F. A., 11024
Mack, E. G., 14609
Mack, G. L., 6268
Mack, H. C., 9656
Mack, M. J., 17090
Mack, W. B., 1248, 8567, 10298, 13977, 13978, 17676
McKaig, N. Jr., 10209
McKay, A. L., 11694
McKay, C. V., 4375
McKay, E. M., 9190, 9247, 9650, 12643, 12972
McKay, F. S., 13277
McKay, Mrs. H. M., 8443
McKay, I. F. S., 12724
McKay, J. W., 12534
McKay, M. B., 14095
McKee, C. M., 871, 17313
McKee, R. W., 7315, 9245, 12870, 12871
MacKeith, B. M., 17265
McKelvey, V. E., 10561
McKenzie, 16925
McKenzie, A., 11341
McKenzie, C. G., 16501
McKenzie, J. B., 16501
McKenzie, R. D., 2615, 15360
McKeown, H. J., 11199
McKeown, K. C., 10595
McKeown, T., 13071
Mackey, A. K., 9232
McKhann, C. F., 8117, 15318
Mackie, D. B., 1004
Mackie, T. W., 2551
Mackie, W. W., 17817
McKinley, E. B., 6146, 13455, 17306
Mackinney, A. L., 15660
McKinney, H. H., 3169, 6658
McKinney, K. B., 1495
McKinney, L. L., 11934, 11935
McKinnon, F., 14676
McKinnon, N. E., 11297, 11702
McKinstry, D. W., 1080
Macklin, C. C., 12923
McKnight, R. H., 7150
McKnight, R. S., 4902
MacLachlan, J. D., 3169
MacLachlan, P. L., 5594, 16420
MacLachlan, W. W. G., 4233
MacLachlin, A. D., 2321
McLain, P. L., 13178
McLaine, L. S., 10467
MacLaren, D. B., 8177
McLarty, D. A., 10115
MacLaughlin, E. H., 3411
MacLay, W. S., 16929
MacLean, A., 9466
McLean, A. L., 9872
McLean, A. P., 14798
McLean, D. L., 2285
McLean, F. C., 395, 5433
McLean, F. T., 5322, 10729
McLean, G. B., 3019
McLean, H. C., 13916, 14112
McLean, J. H., 8179
McLean, M. C., 11695
McLean, M. E., 11613, 15254
McLean, R., 6683, 8630
McLennan, C. E., 9423
McLennan, C. O., 15078
McLennan, H. A., 12530
Macleod, A. G., 11168, 11188
MacLeod, C. M., 11594, 11595
MacLeod, G. F., 17873
MacLeod, J., 6708, 14141, 14142, 15919, 16421
McLeod, J. H., 10451
McMaster, P. D., 701, 3643
McMeek, C. F., 15097
McMichael, J., 7718
McMillan, 14590, 14596
MacMillan, M. J., 3738
McMillen, J. M., 13941
McMinn, H. E., 2866, 17532
McMullen, D. B., 5107
McMullen, L., 8891
McMunn, R. L., 13894
McNally, E. H., 17105
McNamara, E. W., 11024
McNamara, H., 7414
McNamara, Sister M. C., 12725
McNamee, P. D., 8304
McNarry, R. R., 1915
McNaught, J. B., 6744
McNee, 1596
MacNay, C. G., 10437
MacNeal, W. J., 9970
McNealy, R. W., 16936
McNeer, G., 7847
McNeil, E., 6785, 15964
McNeile, L. G., 5670
McNew, G. L., 3141, 3169
MacNider, W. deB., 7569
McNutt, S. H., 6123
McOmie, W. A., 11703
Macovski, Eufrosine, 9082, 14832
Macovski, Eugen, 9082, 14832
McPhaul, W. A., 5093, 6742
McQuarrie, I., 2338, 4136, 7436
Macrae, J., 15203
Macrae, R., 1079
Macrae, T. E., 7461, 7477, 7478, 11007, 11008
McReynolds, D. K., 3169, 15834
McRostie, G. P., 12070, 17591
McShan, W. H., 3861, 9125, 9342
McSwiney, B. A., 9514
McVay, C. B., 669, 706
McVicar, G. A., 13000
McWhorter, F. P., 14329, 6680, 15827, 16119, 17785
Macy, H., 17415
Macy, I. G., 3968, 7830, 9262, 11265, 14494, 16568
Macy, R. M., 14312
Macy, R. W., 12258, 14312
Mada, K., 12756
Madamba, A. L., 17421
Madden, A. H., 5035
Madden, M., 16224
Madden, S. C., 9155
Maddock, S., 7663
Maddox, D., 307
Mada, E. O., 5371, 10754
Mader, E., 12197
Madgefrau, K., 10097
Madinaveitia, J., 3862, 10843
Madison, R. R., 2552, 2553
Madison, S. V., 11970
Madsen, D. E., 2702, 15373
Madsen, E., 17169
Madsen, G. B., 3881
Maeda, K., 13022
Maegraith, B. G., 4087, 4480
Maes, J. P., 7523
Magalpine, R. I., 10258
Magath, T. B., 12643, 16422
Magee, C. S., 12643
Maggiara-Verango, R., 1687A
Magie, R. O., 5002
Magnan, C., 16400
Magne, H., 3774, 14599
Magne, W., 13291
Magnes, J., 14719
Magness, J. R., 3146
Magnoni, A., 13328
Magnus, H. A., 14896
Magnussen, G., 14768
Magnusson, A. E. H., 8413, 15475
Magnusson, K. E., 11696
Magoon, C. A., 13895
Magoun, H. W., 2221, 11396, 12643, 12925, 12926, 16975
Magrou, J., 25, 14004
Magruder, R., 1251, 15619
Magruder, S. R., 7968
Magusi, M., 5613
Magyar, I., 5559
Mahabale, T. S., 4755, 4768
Mahajan, M. R., 17903
Mahaux, J., 16621
Mahdi, M. A., 2350
Maher-Loughnan, G. P., 2095
Mahlén, S., 4137
Mahoney, C. H., 5360, 8508
Mahoney, J. F., 8061, 8130, 15204
Maier, C., 15201
Maier, E., 7066, 13572
Maier, H. C., 12924
Maier, I., 8189
Maier, J., 5519
Maier, K., 15685
Maier, N. E. F., 3992, 9445
Maier-Leibnitz, H., 5544
Maignon, F., 2492
Main, E. R., 538, 2662, 6071, 6072, 9937, 11798
Main, R. J., 9343, 12643
Maingolan, E. J., 12372
Mains, E. B., 1076, 6347, 6348, 15455, 15456
Mainx, F., 5345
Mainzer, F., 4250, 14178, 14945, 14946, 15149
Maire, R., 1075
Maitland, H. B., 1077, 7206, 8398
Maisin, J., 16519
Maison, G. L., 7689, 12643, 14749
Maitland, H. B., 4447, 8108, 8109
Maizels, M., 7250, 16392
Maj, G., 5914
Majid, S. A., 12210
Majlert, W., 4873
Major, R. H., 9403
Majumdar, B. N., 314, 315, 5552
Majumdar, D. N., 644
Makarska, Ia. F., 10844
Makhlinovskii, L. I., 907
Maki, H., 3224, 8225
Makino, S., 7119
Makita, N., 7160
Malam, M., 12812
Malamani, V., 11311
Malamos, B., 2622
Malamud, H. R., 16672
Malamud, N., 16943, 16944
Malan, A. P., 5995
Malán, M., 8025
Malcolm, J. F., 1061
Malcolm, M. M., 11661
Malczynski, S., 5468
Maleci, O., 13299
Málek, I., 4715, 8131
Malencon, M. G., 8402
Malkani, P. G., 13594, 13666
Malkin, J. I., 15150
Malkomesius, P., 8071
Máková, J., 4715
Mall, G., 3863
Mallerin, C., 3153
Malling, B., 13066
Mallis, A., 10610
Mallman, W. L., 4427
Malloch, J. R., 5136
Malloch, 14253, 14254, 14255
Malloy, F. B., 15047
Malloy, H. T., 1918, 1919
Malmberg, M., 2055
Malméjac, J., 5723, 18023, 18135, 18126, 14730
Malnate, E., 14289
Malouf, N. S. R., 3512, 9790
Malone, D., 3436
Maloney, A. H., 11283
Maloney, J. O., 12329
Malterre, H., 11967, 15580
Malteson, C., 12898
Malteson, C., 1948, 2281, 2282, 2283, 2284, 2235, 9344
Maluf, N. S. R., 10771, 16738
Mamiaso, J. P., 4856, 8482
Mamoli, L., 5613, 5637, 5688
Man, E. B., 12966
Manahan, C. P., 419
Manalo, T. J., 1294
Manby, J., 7979
Manca-Pastorino, V., 9975
Manceaux, A., 13257, 14981
Mancini, R. E., 7936
Mancke, 10022
Mandach, E. v., 10667
Mandahl-Barth, G., 5116
Mandekos, A. G., 15965
Mandel, P., 5718
Mandillon, G., 12854
Mandoul, R., 14177, 14179
Manery, J. F., 7254, 12643
Maneval, H., 12387
Mangelsdorf, P. C., 13823
Mangenot, G., 8908
Manger, D., 11172
Mangold, E., 11512
Mangold, O., 752
Mangrulkar, M. Y., 11746
Manguin, E., 8376
Manig, M., 10755
Manil, P., 8612
Manis, W. E., 10108
Manly, M. L., 14547
Manly, R. S., 9136, 15035
Mann, C. E. T., 10225
Mann, C. W., 2180
Mann, F. C., 362, 487, 3658, 7244, 7711, 9400, 9619, 12643, 13113, 16725, 16749
Mann, H. H., 6474, 16260
Mann, M. E., 52, 1613
Mann, P. J. G., 14660
Mann, S. A., 16929
Mann, T., 5509
Mannheim, B. J., 3338
Manning, P. d. V., 9234
Manning, W. M., 7230
Manninger, R., 2793
Mannin, P., 6663
Mannion, H. F., 198

- Manoff, I., 4895
 Manoff, I., 4896, 6712
 Manohar, K. D., 2278, 17391
 Manoil, A., 7087
 Manor, A., 11597
 Manozzi-Torini, L., 13942
 Manresa, M., 16423
 Manseau, A., 2600
 Mansfield, G., 3864
 Mansfield, R., 4188, 5531
 Mansfield, R., 2827A
 Mansfield, J. S., 9524
 Manske, R. H. F., 12036
 Manske, R. H. F., 12037, 12038
 Manske, R. H. F., 12039, 12040
 Manson, D., 12223
 Manson, T., 6261
 Manson-Bahr, P., 5903
 Mantel, K., 794
 Manter, H. W., 10498
 Manter, J. T., 4049
 Manthei, C. A., 15231
 Mantion, J., 2817
 Manuel, S., 7560
 Manville, I. A., 2112
 Manville, I. A., 6517, 14989
 Manwaring, W. H., 13095, 13269, 13456
 Manwaring, W. H., 14833, 15240, 17170
 Manweiler, J., 5240
 Manwell, R. D., 2607
 Manwell, R. D., 10499, 15874, 15966
 Manzini, B., 16986
 Manzini, B., 14969
 Marais, J. S. G., 16449
 Marais, J. S. G., 16472, 16484
 Maras, B., 4894
 Marbe, K., 12563
 Marble, A., 7860, 7899
 Marble, D. R., 17108
 Marceau, F., 492
 Marceao, A. S., 4423, 6018
 Marceao, A. S., 14834
 Marchal, E., 14096
 Marchal, E., 9670
 March, H. F., 6447
 Marchlongo, F., 11321
 Marcou, L., 559
 Marcou, J., 4107
 Marcovitch, C., 10394, 10468
 Marcks Franke, H., 1440
 Maron, I., 12945
 Marcus, E., 12312
 Marcus, E., 4211
 Marcusen, P. V., 2554
 Marcusson, B., 2704
 Maroy, L. F., 14524
 Marczewski, S., 7531
 Marden, K., 8299
 Marderstein, K., 3576, 3577
 Manduel, H., 3548
 Marek, J., 5734, 14548
 Marenzi, A. D., 2086
 Marenzi, A. D., 3855, 3866
 Marenzi, A. D., 5639, 7986
 Mareš, F., 12648
 Marfaing, A., 3
 Margen, S., 13334
 Margolin, A. S., 8420
 Margolis, G., 2068, 3726
 Margolis, L. H., 2063, 3726
 Margolis, O. S., 1776
 Mariani, B., 2521, 5448
 Mariante, T., 12489
 Marie, J. S. F., 13195
 Marie, P., 15978
 Marine, D., 11851
 Marine, D., 12973, 12984
 Marinesco, G., 7690, 11356
 Marini, T. L., 10626
 Marinis, F. De., 1770
 Marinkovitch, R., 6147
 Marinov, L., 13469
 Marion, L., 12040, 12041
 Mark, J., 6190
 Mark, W., 2300
 Markee, J. E., 452
 Markgraf, R., 2827A
 Markgraf, R., 2828, 2867
 Marklund, G., 17533
 Markoff, W., 15375
 Markov, W. N., 17428
 Markov, D. A., 4021
 Markow, H., 15150
 Markowitz, B., 4840
 Markowitz, I., 2139
 Markowitz, J., 800
 Marks, H. H., 7899
 Marks, H. P., 14789
 Marks, H. P., 14790, 14809
 Markstahler, H., 4351
 Markwaller, H., 10940
 Markwardt, L. J., 13943
 Marloth, R. H., 8639
 Marmont, G., 466
 Marmont, G., 2245, 5700
 Marotta, D., 1687A
 Marotta, D., 2946, 2947
 Marotta, D., 2948, 3660
 Marples, E., 7414
 Marquand, C. V. B., 10138, 11891, 13753
 Marquardt, J. C., 2493, 10066
 Marquis, D. G., 7623
 Marr, C. C., 3507
 Marrack, J., 3587, 8132
 Marrazzi, A. S., 4139
 Marrazzi, E., 13178
 Marrazzi, E., 14561
 Marri, R., 11234
 Marri, R., 16790, 16791, 16793
 Marrian, G. F., 2126, 12491
 Marrus, J., 7700, 7701
 Marsden, S. J., 2507
 Marsden-Jones, E. M., 10139, 10140
 Marsden-Jones, E. M., 10141, 10142, 10143
 Marselle, A., 13646
 Marsh, F., 5532
 Marsh, G. L., 2726, 13672
 Marsh, H., 4678, 6241
 Marsh, H. E., 17322
 Marsh, J. T., 15764
 Marsh, M. E., 10947
 Marsh, R. S., 15610
 Marsh, R. W., 1469
 Marshak, A., 7360, 12698
 Marshall, A. J., 113
 Marshall, C., 203, 7664
 Marshall, C. S., 4013
 Marshall, E. A., 18242
 Marshall, E. K. Jr., 2322, 2328
 Marshall, E. K. Jr., 10863, 13178
 Marshall, F. H. A., 14639
 Marshall, G. A. K., 6882
 Marshall, G. E., 8985, 17856
 Marshall, J. B., 8485
 Marshall, J. T. Jr., 7011
 Marshall, N., 18044
 Marshall, R. E., 1252, 17638
 Marshall, R. M., 10210
 Marshall, R. P., 12166
 Marshall, S. M., 12629
 Marshall, T. H., 4828
 Marshall, W., 14947
 Marshall, W. T., 12
 Marsili Libelli, G., 16739
 Marsland, D., 10690
 Marsland, D. A., 4388, 6580
 Marston, A. R., 8469
 Marston, A. T., 17024
 Marston, H. E., 3688, 14440
 Marsubara, K., 12424
 Marszewska-Ziemińska, J., 17429
 Martelli, T., 6078
 Martens, J. L., 6448
 Martens, P., 2908, 7100
 Marthaler, H., 12084, 17709
 Martin, A. C., 9070
 Martin, A. J. P., 7477
 Martin, A. L., 15390
 Martin, A. W., 9180
 Martin, C. J., 7477
 Martin, C. P., 17025
 Martin, D., 1232
 Martin, D. S., 8250
 Martin, G., 8251, 11648
 Martin, G. J., 5546
 Martin, G. W., 1078
 Martin, G. W., 1084, 4743, 11820
 Martin, H., 1469
 Martin, H. E., 14897
 Martin, J., 358
 Martin, J. H., 3759, 9896, 11043
 Martin, J. H., 2921, 6015, 6016
 Martin, J. H., 6017, 10138, 11954
 Martin, J. J. E., 13944
 Martin, J. L., 8758
 Martin, J. M., 4662
 Martin, J. N., 2997
 Martin, J. P., 3165, 4985
 Martin, J. S., 15684
 Martin, J. T., 6474
 Martin, J. W. Jr., 18014
 Martin, L., 9263
 Martin, L. A., 956
 Martin, L. C., 16120
 Martin, N. M., 124
 Martin, R., 4671
 Martin, S. J., 2028
 Martin, S. J., 7754, 7784, 9486
 Martin, S. J., 11235, 12643, 12974
 Martin, V. D., 3190
 Martin, W. E., 5109
 Martin, W. E., 15986, 17634
 Martin, W. H., 2480
 Martin, W. H., 13364, 17410, 17417
 Martin, W. J., 2678
 Martin, W. J., 3169, 10008, 17580
 Martinetti, R., 11234
 Martinetti, R., 16792, 16793
 Martinez, C. A., 7722
 Martinez, E. P., 7969
 Martinez, J. G., 10259, 15661
 Martini, E., 13003
 Martini, P., 5774
 Martini, P., 11236, 16794
 Martini, V., 9182
 Martinoli, G., 13721
 Martins, T., 16622, 16623
 Martinson, B. M., 2236
 Martinson, E. E., 9094, 9095
 Martinus, C., 12671
 Maruyama, H., 3559
 Marvin, J. W., 5262
 Marvin, J. W., 11922, 17558
 Marx, L., 5517
 Marx, W., 947, 3867
 März, R., 8853
 Masamune, H., 16356
 Masarey, A., 16086, 16087
 Maseherpa, P., 4140
 Maschanka, H., 9791
 Masera, E., 1561, 3236
 Masima, M. H., 12643
 Maslin, T. P. Jr., 5240
 Mason, A. S., 6676
 Mason, C. M., 17664
 Mason, C. W., 12112
 Mason, E. A., 7012
 Mason, E. M., 10859
 Mason, H. C., 12757
 Mason, H. L., 2835
 Mason, K. E., 344, 7069
 Mason, M. F., 3589
 Mason, M. F., 7575, 10962
 Mason, T. G., 12200
 Massart, L., 12672
 Masselin, J. N., 12689, 15022
 Massell, B. F., 4481
 Massell, B. F., 4487, 4488
 Masserman, J. H., 2237, 2238, 2324
 Massey, A. B., 11909
 Massey, L. M., 1470, 3154
 Masson, G., 12643, 16424
 Mast, S. O., 177
 Mast, S. O., 5103, 8721
 Mastenbroek, A., 16742
 Master, A. M., 11189
 Masters, E. W., 7926
 Masters, M., 6824
 Masuda, M., 540
 Masunaga, N., 9957
 Masur, W., 12643
 Masure, M. P., 14018
 Mas y Magro, F., 11322
 Matas, R., 5724
 Matchulski, S. N., 14204
 Matheny, G. E., 15891
 Mather, K., 1736
 Mather, K., 3523, 10735, 12554
 Matheson, C., 16112
 Matheson, C., 8936
 Matheson, R., 17976
 Mathew, R., 1994
 Mathews, A. C., 15523
 Mathews, A. P., 3958
 Mathews, G. M., 5182, 5183
 Mathews, O. E., 13851
 Mathewson, A. A., 3854
 Mathias, D. G. B., 11684, 11685
 Mathias, P., 7186
 Mathieu, G., 4837, 15585
 Mathur, P. B., 18998
 Matoff, K., 8700, 10500
 Maton, J., 1415
 Maton, J., 4141
 Matschulan, G., 16357
 Matsukawa, D., 16357
 Matsukawa, D., 16358, 16359
 Matsumoto, H., 11237
 Matsumoto, T., 4969
 Matsumura, S., 7180
 Matsushita, K., 3993
 Matsura, A., 3221
 Matsura, H., 1707, 1708
 Matfield, J., 2827A
 Matthes, K., 1970
 Matthes, K., 1971, 7361, 7362
 Matthes, K., 7363, 7364, 7365
 Matthews, C. B., 8169
 Matthews, E., 322
 Matthews, E. D., 10847
 Matthews, J. R., 10785
 Matthews, L. H., 1657
 Matthews, S. A., 1658, 1659, 1660
 Matthews, S. A., 9345, 12630
 Matthijssen, E., 7732
 Mattick, A. T. R., 6288
 Mattick, E. C. V., 4419
 Mattick, F., 2869A, 7207
 Matuszewski, T., 6289
 Matz, P. B., 7924
 Matzke, E. B., 5262, 11923
 Matzner, K. H., 335
 Matzner, M. J., 16868
 Maublane, A., 6349
 Maude, P. F., 16158
 Maue, G., 4589
 Maughan, G. B., 1931
 Maurenbrecher, R., 17668
 Maurer, E. M., 13127
 Maurer, F. W., 2578
 Maurer, F. W., 2260, 12173
 Mautner, H., 17171
 Mautz, F. R., 12643, 14760
 Maw, M. E., 7244
 Maw, A. J. G., 15119
 Maw, A. J. G., 15120, 15121, 17104
 Maw, W. A., 12643, 15119, 15120
 Maw, W. A., 15121, 17108, 17104
 Mawson, E. H., 5801
 Mawson, M. L., 1615
 Mawson, P. M., 14214
 Maxim, M., 194, 386
 Maximov, N. A., 4959
 Maxon, W. R., 2828A, 4757
 Maxted, W. R., 8115
 Maxted, W. R., 15260, 15278
 Maxwell, C. W. B., 10469
 Maxwell, J., 1760
 Maxwell, K. E., 14110
 Maxwell, L. R., 16180
 May, F., 5543
 May, F., 7843
 May, K., 17266
 May, P., 16795
 May, R. M., 5952, 7111
 May, S. H., 13128
 May, V., 6379, 18724
 Maycock, W. d'A., 10907, 16976
 Mayer, A., 12776
 Mayer, B., 15082
 Mayer, K., 1831
 Mayer, M. R. L., 4570
 Mayer, N., 14479
 Mayer, R. L., 13545
 Mayer, V., 11656
 Mayers, M. R., 5872
 Mayerson, H. S., 7412
 Mayerson, H. S., 7719, 12643
 Maynard, O. W., 7324
 Maynard, L. A., 8736, 14554
 Maynard, M. T. R., 14567
 Mayne, B., 17904
 Mayné, R., 14096
 Mayne, W. W., 2998
 Mayo, C. W., 14748
 Mayr, E., 5184, 7013
 Mayr, E., 7014, 7015, 10642
 Maytum, O. K., 17154, 17172
 Mayuranathan, P. V., 1253

- Mendenhall, W. L., 13178
 Mendes, D., 5138
 Mendes, L. O. T., 1777, 12198
 Mendheim, H., 10501
 Mendiola, N. B., 7181
 Mendoza, D. R., 17534
 Mendoza, G., 16052
 Menefee, G. R., 16997
 Menefee, E. E. Jr., 6148, 9996
 Meneghetti, E., 16797
 Meng, C. M., 16869
 Mengle, H. A., 4572
 Menk, W., 8181
 Menke, W., 16150
 Menkin, V., 624, 2383, 4234
 Menon, M. A. U., 10502
 Menon, T. B., 6747, 15262
 Menozzi, C., 14282
 Menten, M. L., 17173
 Mentz, A., 3417
 Menzel, A. E. O., 8136
 Menzies, W. J. M., 3532, 9057, 9058
 Mequignon, A., 8653
 Meranzone, D. R., 12900
 Meranze, T., 12900
 Mercado, T., 17636
 Merchant, F. E., 10563
 Merchant, I. A., 6315
 Mercier, F., 5775
 Mercier, L., 13213
 Mercier, P., 13467
 Meredith, D., 15546
 Meredith, H. V., 2052, 5796, 8026
 Meredith, W. O. S., 11948, 15555
 Merendi, A., 8897, 12007
 Mereshcherakow, A. M., 11373
 Merker, E., 3485
 Merkle, F. G., 13057
 Merkuze, Z., 13852
 Merling-Eisenberg, K. B., 4597
 Merlini, D., 11799
 Merlis, J. K., 16699
 Merriam, C. W., 2784
 Merrill, E. D., 6391, 11855, 11868
 Merrill, 11892, 11893, 15505
 Merriman, D., 1683, 18045
 Merritt, J. M., 10395
 Merten, 4895
 Merten, R., 3657
 Mertens, E., 11064, 11065, 11066
 Mertens, E., 12758
 Mertens, O., 5538
 Mertens, R., 6979, 6983
 Mertens, W. K., 6191, 10053
 Mertens, O. T., 3604
 Merton, H., 18663
 Mertz, E. T., 12759
 Mery, F., 15376
 Mes, M. G., 12092
 Mesa, A. de, 1506, 15912
 Meschan, I., 12643
 Meschkat, A., 14395
 Meserve, A. B., 6751
 Mesnil, L., 3188
 Mesrobian, J., 2620
 Mesrobian, L., 803, 2518
 Messer, R., 15322
 Messimy, R., 14731
 Messinger, E., 9526
 Metallmann, J., 10675
 Metcalf, F. P., 6391
 Metcalf, R. G., 16448
 Metcalf, Z. P., 8785
 Metcalfe, C. R., 6449
 Metcalfe, G., 10144, 10145, 10155
 Metcalfe, G., 17559
 Metcalf, J., 6552
 Métrod, G., 2808
 Mettam, R. W. M., 11747
 Mettler, S. R., 13259
 Mettler, F. A., 4007
 Metz, O. W., 12648, 16957
 Metz, O. W., 5298
 Metzendorf, H., 7929
 Metzger, C. H., 3116, 4838
 Metzger, F., 16884
 Metzger, N., 2117
 Metzger, O. F., 15663
 Metzger, W. H., 2970
 Metzger, W. H., 2976, 6501, 15550
 Metzner, C. A., 2181
 Meuche, A., 12611
 Meulemans, I. O., 328
 Meulemans, O., 318, 9235
 Meulengracht, E., 2397, 4135
 Meuli, L. J., 15774
 Meyer, L., 4212
 Meyer, A., 769
 Meyer, A. E., 12643
 Meyer, A. R., 12784, 12785
 Meyer, B., 2109
 Meyer, B. S., 3075, 14034
 Meyer, C., 12489
 Meyer, D. B., 6124
 Meyer, E., 2104
 Meyer, F., 493
 Meyer, F. L., 4142, 11496
 Meyer, F. M., 4258
 Meyer, H., 750, 2470
 Meyer, H. A., 11153
 Meyer, J. R., 9951
 Meyer, K., 7366
 Meyer, K. A., 13457, 17174
 Meyer, K. F., 15664, 16936
 Meyer, S. L., 6214, 11793
 Meyer, K. H., 13458, 13698, 15235
 Meyer, M., 15236, 15237, 15319
 Meyer, P. F., 5450
 Meyer, P. F., 18214
 Meyer, R. E., 5405
 Meyer, R. E., 7494
 Meyer, R. K., 3794, 3861, 5631
 Meyer, S. L., 5640, 9125, 9342
 Meyer, S. L., 12993, 14621, 17175
 Meyer, S. L., 10527
 Meyer, S. L., 11849, 17485
 Meyer, T., 13774
 Meyer-Heck, P., 14898
 Meyerhof, O., 5544
 Meyers, F. M., 14180
 Meyers, H. D., 17176
 Meyers, M. P., 11200
 Meyerthaler, F., 7518
 Meylan, C., 4751
 Meyler, L., 2405
 Meyrieux, M., 6080
 Mezera, A., 10118
 Miceli, A., 17185
 Michael, K. E., 4427
 Michael, P., 13546
 Michael, S. E., 16361
 Michaelis, P., 1278
 Michail, D., 12675
 Michael, 13067, 16488
 Michalski, A., 9025
 Michael, F., 10984
 Michel, E., 12991
 Michel, H. O., 206, 17252
 Michelbacher, A. E., 3189, 8798, 9003
 Michelson, I. D., 10080
 Michener, H. D., 1367
 Michez, J., 7279, 14509
 Mick, A. H., 13849, 14380
 Mickel, C. E., 6923
 Mickelson, O., 8730
 Mickelson, M. N., 16529
 Mickel, F. L., 4528, 6215
 Micklem, T., 1254
 Mickel, 1255, 3178
 Mieczynski, J., 7132
 Middendorf, F. G., 8909
 Middleton, A. D., 164
 Middleton, J. T., 1482
 Middleton, 8169, 8603
 Middleton, W., 14044, 17761
 Midler, G. B., 1454
 Midler, 11292
 Midgley, A. R., 18215, 16900
 Midgley, E. E., 4839
 Miebnner, H., 15377
 Miège, B., 2949
 Miège, B., 2950, 8470
 Miegerville, J., 11748
 Mieghe, J. V., 16241
 Mielke, J. L., 12125
 Mielnik-Kosmiderski, S., 9873
 Mies, H., 494
 Mies, 4143, 5697, 13096
 Miescher, G., 3578, 17177
 Miescher, K., 3869
 Miescher, 3870, 5641, 12976
 Mignolet, F., 11323
 Mihelcic, F., 6861
 Mihelcic, 6862, 6863
 Mijneff, C. J., 7532
 Mikhailova, K. A., 16181
 Mikkelsen, M., 5194
 Mikola, O. J., 11157
 Mikulaszek, E., 4470
 Milaknis, A., 6282
 Milam, D. F., 15673
 Milam, J., 14121
 Milan, A., 15875, 16182
 Milas, N. A., 5579
 Milbrath, D. G., 10377
 Milbrath, J. A., 4965
 Milbrath, 6655, 6680, 15827
 Mildbraed, J., 2827A
 Mildbraed, 2828, 2834
 Mildbraed, 2870, 15483
 Miles, A. A., 15151, 15152
 Miles, D. W., 9919
 Miles, W. R., 12738, 14707
 Milhaud, M., 479
 Milhorat, A. T., 280
 Milhorat, 12643, 14525
 Militzer, W. E., 1914
 Milks, H. J., 15378
 Milla, E., 9502
 Millan, R., 15556
 Millar, C. E., 11949
 Millar, J. B., 15665
 Millar, M. B., 16397
 Millar, A., 9798
 Miller, A. H., 5207
 Miller, A. K., 5119
 Miller, A. K., 5120, 8741
 Miller, A. T., 10874
 Miller, A. T. Jr., 12643
 Miller, B. F., 2012
 Miller, B. F., 2150, 5480
 Miller, B. J., 16475, 16480
 Miller, C. D., 11011
 Miller, C. P., 9959
 Miller, D., 324, 12008
 Miller, D. D., 14851
 Miller, D. S., 5642
 Miller, E. G., 3105
 Miller, E. G., 4862
 Miller, E. S., 9247
 Miller, 12643, 14514, 14540
 Miller, E. V., 14035, 16249
 Miller, E. W., 601, 602
 Miller, F. J., 10786
 Miller, F. R., 643
 Miller, F. W., 9615, 9616, 13260
 Miller, F. W., 18105
 Miller, G. S. Jr., 18105
 Miller, H., 8900
 Miller, H. R., 14769
 Miller, J. C., 17592
 Miller, J. H., 6350
 Miller, J. L., 5996
 Miller, J. K., 7933, 15470
 Miller, J. T., 1220
 Miller, J. T., 2925, 15578
 Miller, J. W., 11364
 Miller, L., 13178, 14993
 Miller, L., 14457
 Miller, L. I., 3169
 Miller, L. J., 16425
 Miller, L. P., 6585
 Miller, M., 1482
 Miller, M., 2325, 5656, 13014
 Miller, M. A., 16498
 Miller, M. J., 7088, 17905
 Miller, M. W., 790
 Miller, N. J., 4663
 Miller, P. A., 1482
 Miller, P. L., 3169
 Miller, P. R., 15890
 Miller, P. W., 17754, 17755
 Miller, P. W., 1471
 Miller, 15889, 17838
 Miller, R. A., 4376, 12977
 Miller, R. C., 6265
 Miller, R. E., 5671
 Miller, R. H., 13289
 Miller, R. N., 15012
 Miller, R. R., 6962
 Miller, R. S., 5185
 Miller, R. S., 5186, 10643
 Miller, S., 17178
 Miller, S. C., 541
 Miller, W. T., 8323
 Millet, L'Abbe, 10831
 Milletti, M., 2448
 Millidge, A. F., 14441
 Millikan, G. A., 3615
 Milliron, H. E., 10611
 Mills, C. A., 3668
 Mills, C. A., 3709, 4057, 8987
 Mills, C. W., 4640
 Mills, E. S., 636, 7874
 Mills, H. B., 13, 6943
 Mills, J. H., 4089
 Mills, J. R. F., 7827
 Mills, K. O., 2472
 Mills, L. H., 8873
 Mills, P. J., 1481
 Mills, W. D., 6681, 15889
 Mills, W. R., 12147
 Milne, H. V., 5187
 Milne, L. J., 3275
 Milne, M. J., 3361, 12407
 Milne, R. A., 10204
 Milner, H. W., 12106
 Milochewitch, S., 4643
 Milovanov, V. K., 5974, 5975
 Milsum, J. N., 11983
 Milton, W. E. J., 16261, 17573
 Milum, V. G., 15937
 Minard, D., 12643
 Minder, W., 1907
 Minibeck, H., 16565
 Minor, F. W., 2740
 Minot, A. S., 5874
 Minot, 7785, 7786, 14458
 Minot, G. R., 14948
 Mintz, E. U., 11127
 Mintz, M., 12953
 Miodonski, J., 7635
 Mirimanoff, A., 3091, 7570
 Mirov, N. T., 2825
 Mirsky, I. A., 3679, 12643
 Mirza, M. B., 16470, 16624
 Missiroli, A., 14181
 Missiroli, 1687A, 8722
 Misso, C., 5965
 Mitamura, T., 952
 Mitchell, A. G., 2562, 17364
 Mitchell, D. R., 2320, 8182
 Mitchell, G. A. G., 5274
 Mitchell, 17041, 17058
 Mitchell, G. F., 1841, 16257
 Mitchell, H. H., 5877
 Mitchell, H. H., 7456, 7459, 11268
 Mitchell, 14545, 14546, 14550
 Mitchell, H. K., 17722
 Mitchell, H. S., 2065
 Mitchell, J., 8468
 Mitchell, J. E. M., 10260
 Mitchell, J. W., 10304
 Mitchell, 13986, 15712
 Mitchell, L. C., 17280
 Mitchell, N. B., 2769
 Mitchell, T. B., 6924
 Mitchell, 6925, 6926
 Mitis, H. v., 10801
 Mitomo, S., 7952
 Mitra, B. N., 1058, 6916
 Mitra, M., 3111
 Mittelmann, B., 385
 Mittenzwei, H., 17729
 Mittermaier, E., 13082
 Mittmann, O., 5303
 Miura, H., 12761, 13129
 Miwa, M., 12699, 12705
 Miwa, S., 667
 Mix, A. J., 6351, 11821
 Mixner, J. P., 3890
 Miyadi, D., 10802
 Miyagawa, Y., 17375
 Miyasaka, O., 3232
 Miyata, T., 8154, 13565
 Miyazaki, I., 17941
 Miyazaki, T., 3969
 Möbius, M., 4799
 Mochtar, A., 6183
 Mochtar, 6191, 6192
 Moczar, L., 6927, 10612
 Modern, F., 4483
 Modern, 8187, 17179, 17180
 Modern, F. S., 13150
 Moe, C. R., 3274
 Moe, G. K., 7720
 Moe, G. K., 7721, 12648
 Moehlig, R. C., 16938
 Moen, J. K., 407
 Moerikofer, W., 16248
 Moerke, G. A., 10857
 Moers, H., 7325
 Moersch, F. F., 16828, 16945
 Moetsch, J. C., 543, 9934
 Moewus, F., 79
 Moewus, 6600, 10106, 10305
 Moffat, W. M., 3871
 Moffitt, J., 3538
 Moffitt, 5188, 5207, 16088
 Mofshin, B., 14701
 Mogensen, K. R., 716
 Moglia, J. A., 12762
 Moglia, J. L., 16426
 Mohammad, Q. A., 6454
 Mohan, B. N., 12268
 Mohan, N. P., 12009
 Mohler, H., 2076
 Mohler, W. A., 15379
 Mohr, E., 3383
 Mohr, E., 12451, 12452
 Mohr, E. O. J., 1825
 Mohr, O. L., 14376, 17115
 Mohr, W., 8181, 12245
 Moine, D. F., 17615
 Moisset de Espanes, E., 7722, 7787, 11238
 Molander, A. R., 1867
 Moldaven, A., 13374
 Moldenke, 2865
 Moldenke, H. N., 4769
 Molegode, W., 13896
 Molina, G., 4498
 Molina, L., 2555, 2556
 Molinier, R., 7208
 Molintas, D. M., 1562
 Molisch, H., 8632
 Molisch, M., 3372
 Molitor, A., 18027, 18028
 Molitor, H., 4131
 Moll, T., 7788, 14836
 Moll, T., 12869
 Mollari, M., 18647
 Mollendorff, W. v., 8570
 Möller, H., 7970, 14837
 Möller-Christensen, E., 16928
 Mollerstrom, J., 3673
 Möllgaard, H., 5997, 6242
 Mollier, G., 17002
 Mollier, S., 663
 Mölling, E., 230
 Mollison, T., 8027
 Mollo, L., 9746, 11437
 Mollo, 13607
 Molonut, N., 17181
 Moloney, P. J., 909
 Moloney, C. J., 4484, 17355
 Molony, C. J., 17138
 Molser, H., 10503
 Momma, K., 17267
 Mommaerts, W. F., 6595
 Momose, S., 1104, 1105
 Monastero, S., 5044
 Monaudi, J., 12901
 Moncrieff, A., 2346
 Moncrieff, Mrs. P., 5189
 Mondolfo, U., 6081
 Mondofiedo, M., 4404, 17075
 Montgomery, M. L., 354
 Monier-Williams, G. W., 7925
 Monlux, W. S., 15380
 Monnier, M., 373, 16582
 Monoyer, A., 2837
 Monroe, H. A. U., 10467
 Monroe, J. S., 2347
 Monroe, C. F., 2494
 Monroe, 6478, 8089
 Monroe, C. G., 17593
 Monroe, E., 9538
 Monroy, A., 5959, 18335
 Monson, O. W., 109
 Montaldo, P., 9350
 Montalenti, G., 8923
 Montanaro, J. C., 5893
 Montanelli, L. G., 13946
 Montemartini, L., 17647
 Montero, A., 14192
 Montero, A. M., 6748

- Montfort, C. J. 1889
 Montpellier, J. 15881
 Monzi, M. 8593
 Mood, G. McF. 4485
 Moers, C. A. 1193
 Mooi, J. C. 10384
 Mookerjee, H. K. 5880
 Moon, F. E. 15787
 Moon, H. H. 1178
 Moon, V. H. 2557
 2930, 14002
 4251, 17182
 Moor, A. de. 13598
 Moor, H. D. 11550, 11662
 Moore, A. R. 17050
 Moore, C. R. 9349
 Moore, D. C. 18897
 Moore, D. F. 13270
 Moore, E. 2581
 Moore, E. B. 5420
 Moore, G. A. 3398
 Moore, G. E. 5219
 Moore, G. R. 15256
 Moore, G. T. 12481
 Moore, H. B. 3302
 3303, 10796, 12577
 Moore, H. C. 8471
 Moore, J. A. 7624
 Moore, L. A. 8090
 11004, 14483A, 17085
 Moore, M. L. 16550
 Moore, M. T. 16910
 Moore, R. A. 2442
 16418, 16664
 Moore, R. C. 10555
 Moore, R. E. 13859
 Moore, S. W. 579
 Moore, W. 15917
 Moore, W. C. 15806
 Moore, W. D. 3155
 Moorhouse, A. T. 1337
 Moorhouse, R. B. 12010
 Moorthy, V. N. 3248, 15998
 Morales, C. E. 16659
 Morales-Otero, P. 4486, 15155
 Moran, T. 9083
 9823, 9824
 Morando, G. O. 9350
 Morant, G. M. 2460
 2464, 17024, 17026
 Morato, M. J. X. 13295
 Morat6-Manaro, J. 9851
 M6rbel, W. 795
 Moreau, F. 2809, 2810
 Moreau, Mme. 2809, 2810
 Moreau, R. E. 165, 18074
 Moreau, W. M. 165
 Moreau, Mrs. W. M. 7016
 Moreira, J. 14182
 Morel, R. 13485
 Moreland, C. F. 10320
 Moreland, R. W. 5036, 10413
 Morellet, L. 17482
 Morellet, J. 17482
 Morelli, A. 7488, 16427
 Morellini, M. 2521
 Morettini, A. 15604
 Morgan, A. E. 10996
 13672, 16521
 Morgan, A. H. 14318
 Morgan, B. G. E. 16511
 Morgan, C. L. 6023
 Morgan, C. T. 2182, 16673
 Morgan, D. O. 6749
 Morgan, D. R. 511
 7524, 9686
 Morgan, E. J. 5461
 Morgan, E. L. 15883
 Morgan, H. 15285
 Morgan, H. E. 9874
 Morgan, I. M. 13463
 Morgan, J. D. 16673
 Morgan, J. L. 10884, 12643
 Morgan, L. V. 1726
 Morgan, Sister M. N. 1058, 1359
 Morgan, M. W. Jr. 11135, 16681
 Morgan, R. B. 4426
 Morgan, R. F. 8091
 Morgan, T. E. 4389
 4390, 7120, 12512
 Morgan, W. A. 14577, 16220
 Morgan, W. M. 10287
 Morgan, W. T. J. 2077, 17183
 Morgareidge, K. 3742, 16542
 Morgeli, E. 3905
 Morgenstern, V. 5540
 Morgulis, S. 9218, 9625
 Mori, K. 952, 4214, 12699
 12705, 12845, 12846
 Mori, S. 6420
 Mori, T. 9875, 10087
 12902, 12903, 16495
 Morigami, S. 4213
 Moriki, H. 7367
 Morin, G. 13160
 13169, 14721
 Morin, H. G. S. 16244
 Morisita, T. 17376
 Morison, B. R. 5692
 Morison, M. B. 13947
 Morita, I. 14733
 Moritz, C. E. 5263
 Moritz, W. 7950
 Moriwaki, D. 7151
 Moriyama, I. M. 986
 995, 6209
 Mork, E. 15666, 15667
 Morneweg, W. 5443
 Morohosi, S. 7152
 Morozova, E. N. 628
 Morozovski, N. S. 13243
 Morrell, J. A. 9332
 Morris, A. A. 1256
 Morris, H. D. 15533
 Morris, H. J. 3701
 3703, 4106
 4144, 11363
 Morris, H. P. 3703, 4132
 Morris, L. L. 13898
 Morris, O. M. 15933
 Morris, P. A. 10562
 Morris, T. N. 10063
 10226, 10227
 Morrison, A. P. 2558
 Morrison, F. B. 5996
 Morrison, H. B. 8949
 Morrison, J. L. 2871
 11558, 12904, 13178
 Morrison, S. 2105
 Morrison-Scott, T. 5240
 C. S. 12643
 Morrissey, R. W. 3195
 Mors, H. 15098
 Morse, J. B. 15231
 Morse, L. M. 2037, 14435
 Morstatt, H. 10378
 Mortensen, E. 13899
 Mortensen, V. 13808
 Mortimer, C. H. 5397
 Mortimer, H. 1946
 4285, 16387
 Morton, C. V. 2872, 4757, 4758
 10146, 11850, 17535
 Morton, H. E. 8270, 9997
 Morton, H. G. 16798
 Morton, J. J. 11292, 13215
 Morton, R. A. 9398
 11000, 11001
 11002, 11005
 Morton, T. H. 7981
 Morton, W. R. M. 17054
 Moruzzi, G. 10918
 Morwick, F. F. 8486
 Mosebach, G. 1386, 13994
 Mosely, M. E. 12494
 Mosenthal, H. O. 11190
 Moser, F. 8059
 8060, 10196
 Mosinger, M. 13170
 13171, 14642, 14838
 Mosna, E. 6129, 10504
 Mosonyi, J. 12978
 Moss, A. E. 14436
 Moss, E. G. 5038
 Moss, E. S. 9998
 Moss, J. M. 4525, 11538
 Moss, T. C. 11109
 Moss, W. G. 5736
 Mosseray, R. 3026
 Mossige, J. C. 12555
 Mossige, K. 968
 Mossman, H. W. 4381
 Mosto, D. 13621
 Moszynski, A. 6815
 Mote, D. C. 14109
 Mote, F. A. Jr. 7683
 Mote, J. R. 4481
 4487, 4488
 Motel, W. G. 2326
 Mothes, K. 3085, 15750
 Motida, N. 7283
 Motley, H. E. 12643
 Motte, J. 11924
 Mottey, C. McC. 14416
 Mottram, J. C. 10955, 16652
 Motts, G. N. 1257
 Motwani, R. C. 4382
 Motzok, I. 6475
 Moulin, F. W. K. de. 4679
 Moul, F. H. 16280
 Moulthrop, P. N. 5219
 Moulton, D. 8799
 Mounce, I. 1079
 Mounfield, J. D. 193
 Mountford, M. 3887
 Moura, A. de. 9224
 Moura-Campos, F. A. de. 9264
 Mourgue, M. 12863, 13272
 Moushe, H. 10644
 Moussatch6, H. 11140
 14732, 14840
 Moutte, M. 12764
 Movers, F. 9777
 Mowbray, V. 18105
 Mowry, H. 15819
 Moxon, A. L. 3508
 10197, 11239
 Moyano, B. A. 7912
 Moyer, A. J. 3725
 Moyer, E. Z. 3719
 Moyer, L. S. 15128
 Moynot, M. 6352
 Moy-Thomas, J. A. 8813, 16053
 Mozley, A. 12612
 Mraz, E. M. 3728
 6518, 17405
 Mu, J. W. 596, 9980
 Mucha, V. 879
 Mudge, C. S. 4540
 Mudrow, L. 11590
 Mueller, J. F. 6794
 Mueller, J. H. 3770
 6312, 10088
 Mueller, P. B. 16428
 Mueller, W. S. 15109, 17090
 Muenschner, W. C. 2897, 12042
 Muenzinger, K. F. 9447
 Muether, R. O. 4489
 Mufarrij, A. K. 9101
 Muggier, L. 2872A
 Muhlbock, O. 9352
 9416, 14440
 Muhlendorf, A. 8377
 Muir, E. 15320
 Mukasa, H. 674
 Mukerji, B. 188
 7789, 13178
 Mukherjee, B. 6310
 Mulaik, S. 5230
 Mulay, B. N. 4759
 Mulder, A. G. 12643
 Mulder, J. 4618, 4619
 Mulford, F. L. 4760
 Mulinos, M. G. 4090, 9552, 12643
 18155, 18178, 16737
 M6ller, 125
 M6ller, A. 9680
 M6ller, C. 2274, 15032
 Muller, C. H. 12593, 13748
 M6ller, D. 12085
 M6ller, E. A. 4091, 16718
 M6ller, F. 7444
 M6ller, F. H. 13216
 M6ller, H. A. 9807
 M6ller, H. J. 3407
 M6ller, J. H. 1907, 14372
 M6ller, K. M. 14839
 M6ller, L. 6984, 6985
 10170, 10635, 16059
 Muller, P. 2144, 3825
 3908, 7208, 9264
 M6ller, R. 229
 M6ller-Stoll, W. R. 4725, 4940
 Mullin, F. J. 9446, 12643
 Mullison, W. R. 15699, 17674
 Mulschitzky, A. 16870
 Mulvey, R. R. 17601
 M6nch, H. 11796
 Munch, J. O. 4145
 M6ndel, O. 2679, 11709
 M6ndel, R. 2213
 Mundkur, B. B. 2811
 Munger, F. 10401
 Munger, M. 13261
 Mu6oz, A. T. 9932
 Mu6oz, C. 11894
 Munro, E. K. 10982
 Munro, H. N. 7086, 18019
 7086, 18019
 Munro, J. A. 3365
 5424, 14114
 14275, 15928
 Munro, M. P. 7408
 Munro, S. S. 420
 1778, 3970, 7113
 Munsell, D. W. 13178
 Munsell, R. I. 15557
 Munsterhjelm, A. 13055
 Muntoni, F. 1687A, 3661
 Muntwyler, E. 13189
 M6ntzing, A. 12507
 Munz, P. A. 4786
 6421, 6422, 7048
 M6nz, P. 355
 Murao, S. 16541
 Murata, H. 17430
 Murdia, M. S. 7101
 Murgatroyd, F. 8197, 15154
 Murlin, J. R. 7244
 10947, 10963, 12643
 Murree, A. E. 13900
 Muroi, T. 880
 Murphey, E. E. 5190
 12437, 12643
 Murphey, H. S. 14857
 Murphy, A. M. 6477
 Murphy, E. L. 16407
 Murphy, H. C. 1205, 17818
 Murphy, H. F. 13802, 13824
 Murphy, J. A. 16799
 Murphy, J. M. 15404
 Murphy, K. M. 597
 Murphy, M. 5272
 Murphy, M. M. Jr. 4874
 Murphy, P. A. 8609, 8611
 Murphy, R. C. 7017
 Murphy, R. E. 5272
 Murphy, R. G. 16871
 Murphy, R. P. 2951
 Murray, C. W. 15859
 Murray, G. H. 4875
 Murray, M. M. 5456
 Murray, N. L. 15920
 Murray, R. K. S. 2999
 3166, 10228
 Murray, W. G. 17594
 Murray, W. S. 598
 Murrill, W. A. 4737
 6353, 6632, 8403
 Musbach, F. L. 15535
 M6sch, H. J. 4010, 5697
 M6sehold, W. 16807
 Mushin, R. 4970
 Mushulov, L. 15153
 Mussehl, F. E. 15111
 Musulin, R. R. 16581, 16533
 Mutcher, A. J. 6833
 Mutinelli, A. 15558
 Mutsaers, W. 8188, 9876
 Mutzenbecher, P. v. 12807
 Muylle, G. 12264
 Myers, A. T. 13895
 Myers, F. J. 6807
 Myers, G. S. 5156, 5155, 5156
 11229, 16054, 16055
 Myers, J. 1939, 3691
 Myers, J. A. 10009
 11697, 13193
 Myers, M. C. 12071
 Myerson, A. 14829, 16318
 Myhre, G. 11598
 Myhrman, G. 7691, 7870
 Myrback, K. 14440
 Myrdal, A. 8961
 N
 Nabel, K. 6214
 Nabelek, V. 14052
 Nabih, A. 10528
 Nabih, M. S. 17807
 Nachmansohn, D. 7556, 14661
 Nader, D. N. 3899
 Nadler, S. B. 13262
 Naef, A. 9761
 Naegeli, C. 4571
 Nagahiro, K. 1727, 2449
 Nagakura, K. 2559
 Nagao, M. 4918
 Nagasima, H. 8576
 Nagel, A. 2560
 Nagel, W. O. 160
 Nageotte, J., 4368, 7951
 Naghschi, J. 8242
 Nagy, R. 17815, 17819
 4717, 17782
 Nahum, L. H. 4072
 7790, 11191, 12643
 Nai-Chuan, K. 2367
 Naik, R. N. 2706
 Nair, K. M. 17486
 Nair, U. S. 8972
 Nakagawa, K. 16429
 Nakahara, W. 4208
 4214, 4215
 12845, 12846
 Nakajima, H. 17908
 Nakamura, H. 341
 15421, 15426
 15781, 15782
 Nakamura, K. 13459
 Nakamura, T. 1714
 Nakano, S. 16617
 Nakashima, S. 8677
 Nakayama, H. 3784
 Nakayama, H. 13713
 Nakazawa, H. 5867
 Nakornthap, A. 17568
 Nalini, K. P. 3379
 Nall, G. H. 9059
 Namekawa, K. 798, 881
 Nandi, B. K. 3590
 Nandi, H. K. 2873
 Napier, L. E. 644
 Narasaka, S. 10919, 12825
 Narasimhamurthy, G. 5521
 Narayanan, E. K. 5453
 Narayanan, E. S. 1522
 Nardi, P. 6082
 Nash, L. B. 13910
 Nash, R. W. 12209
 Nason, G. I. 4068
 Nasenov, D. N. 10845
 Nasr, A. H. 15435, 15486
 Nasset, E. S. 10947, 12643
 Nassim, R. 12643, 16746
 Nassonov, D. N. 3549, 4050
 Nassonov, N. V. 17081
 Nafar, R. 2611, 11578
 Nath, D. H. 6454
 Nath, V. 7844
 Nathanson, I. T. 9404, 9590, 9640
 12979, 14899, 16627
 Nathanson, M. H. 14600, 14839
 Natividade, J. V. 14333, 14361
 Natolski, R. 11192
 Natvig, H. 16594
 Nau, C. A. 11365
 Nauck, E. G. 6789
 Nauck, E. T. 7930
 Naumov, N. A. 6354
 Nauss, R. W. 1594, 14192
 Nauta, J. H. 4255
 Navashin, M. 16159
 Naves, Y. A. 1684
 Navratil, E. 9424
 Naylor, A. W. 15740
 Naylor, E. E. 1117
 Nayrac, P. 4022
 Neal, D. C. 1481
 Neal, H. V. 13290
 Neal, T. A. 5875
 Neave, S. A. 16127
 Nebel, B. 9079
 Nebel, B. R. 8941
 Necheles, H. 2328, 12643
 Nedzel, A. J. 2106, 10759
 Needham, D. M. 7692
 Needham, J. 753
 7244, 7308
 Needham, J. G. 1387
 Needham, P. R. 137
 7239, 10809

- Needler, A. W. H., 3384
 Needles, R. J., 13550
 Neel, J., 9784
 Neel, L. R., 782
 Neetzel, J. R., 10242
 Neff, M. S., 13901
 Negadi, G., 1134
 Nègre, L., 6083
 Negri, G., 10701
 Negri, G., 12482, 12483
 Negro, C., 2561, 2648
 Negro, G., 2680
 Negroni, P., 4644, 9981
 Nehring, K., 4840
 Neidie, E. K., 8070, 8071
 Neiger, R., 10317
 Neil, J. H., 2307
 Neil, J. H., 7985
 Neill, R. M., 1863
 Neilson, E. S., 7220
 Neilson, E. T., 231
 Neischulz, O., 2708
 Neish, A. O., 14010, 17730
 Neisser, H., 4490
 Neitz, W. O., 1583, 8219
 Neitzel, W., 1952
 Nélis, P., 13460, 13648
 Nelmæs, E., 11869, 11870
 Nelson, A. A., 2443
 Nelson, A. L., 6149, 15087
 Nelson, A. L., 3539, 18090
 Nelson, C., 459
 Nelson, E. E., 7791
 Nelson, E. M., 14440
 Nelson, E. W., 126, 15559
 Nelson, F. E., 9816
 Nelson, F. E., 11782, 17416, 17417
 Nelson, G. H., 6266
 Nelson, J. B., 2635
 Nelson, J. B., 4598, 13574
 Nelson, J. F., 14533
 Nelson, J. M., 8554
 Nelson, J. M., 4948, 6613
 Nelson, J. W., 5768
 Nelson, L. A., 17184
 Nelson, M., 13816
 Nelson, N., 12643
 Nelson, O. A., 14146
 Nelson, P. M., 542, 3267
 Nelson, R., 8169
 Nelson, R. A., 17605
 Nelson, R. C., 3873
 Nelson, R. C., 4943, 10327
 Nelson, V. E., 270
 Nelson, W. E., 2562
 Nelson, W. O., 380
 Némec, A., 1296
 Némec, A., 1297, 1447, 10261
 Némec, A., 10262, 10263, 10264
 Némec, A., 13948, 13949, 17656
 Nemoto, F., 13587
 Nepveu, P., 15934
 Neri, F., 8701, 17185
 Neri, F., 16700, 16872
 Nerksion, J., 12643
 Neseni, R., 4954
 Nèspar, E., 7489
 Neter, E., 2563, 6084
 Neter, E., 7368, 11599, 11600
 Nethersole-Thompson, C., 14299
 Nétien, G., 128
 Netter, A., 352
 Netter, H., 16414
 Nettles, W. F., 13902
 Nettles, W. C., 1481, 12172
 Nettleship, A., 9607
 Neu, W., 12330
 Neubauer, H. F., 1069
 Neubauer, W., 1298
 Neuenschwander-Lemmer, N., 14535
 Neufeld, A. H., 3874
 Neufeld, A. H., 11067, 11068, 12643
 Neufeld, F., 15321
 Neufeld, L., 1893
 Neugebauer, T., 17736
 Neuhaus, W., 14183
 Neuhoef, W., 8397
 Neumann, H., 6450, 15876
 Neumann, H. J., 11435
 Neumann, R., 16355
 Neumann, W., 7309
 Neurath, H., 3127, 7369
 Neustadt, R., 8875, 16318
 Neustaedter, M., 16873
 Neuwald, F., 16783
 Neuweiler, W., 421
 Neuweiler, F., 2326, 12643
 Neuwohler, F., 1842
 Neveer, H. E., 4065, 6119
 Neveu-Lemaire, M., 14164
 Newall, R. J., 4898
 Newburgh, L. H., 7431
 Newcombe, C. L., 9206
 Newcomer, E. H., 6380
 Newcomer, E. J., 12472
 Newell, N. D., 10563, 10564
 Newhall, A. G., 8169
 Newlon, W. E., 783
 Newman, D., 16221
 Newman, G. C., 14629
 Newman, H. H., 8878
 Newman, H. W., 9135, 9515
 Newport, N. M., 11550
 Newsom, I. E., 1017
 Newton, J. D., 8479
 Newton, M. L., 15760
 Newton, W. H., 2165
 Newton, W. H., 3876, 9353, 12644
 Neyman, J., 1814
 Neymann, N., 9425
 Niyami, N. G., 16566
 Ni, T. G., 2403
 Nice, M. M., 7018
 Nichita, G., 8840, 18075
 Nichita, G., 18187
 Nichol, A. A., 7243
 Nicholas, J. E., 15113
 Nicholes, H. J., 7566
 Nicholls, A. G., 12331, 12629
 Nicholls, J. V. V., 2430
 Nichols, D. G., 5222, 18105
 Nichols, J. T., 1638
 Nichols, J. T., 6963, 6964
 Nichols, J. T., 6965, 6966
 Nichols, P. F., 6518
 Nichols, R. F. W., 1443, 4979
 Nicholson, H. C., 12643
 Nicholson, T. F., 11089
 Nickerson, J. T., 700
 Nickerson, J. T., 15322
 Nickles, J. M., 5278
 Nicodaux, M., 10920
 Nicodaux, R. E., 7597
 Nicol, B. M., 12897
 Nicolai, B. M., 7519
 Nicolai, M. F. E., 6596
 Nicolai, P., 16987
 Nicolas, G., 4942, 6355
 Nicolas, S., 11618
 Nicolaus, W., 2707
 Nicolayson, R., 12862
 Niculesco, P., 14581
 Nicolle, P., 11324
 Nieberle, K., 13217
 Nicolini, P., 5776
 Niederhauser, A. de, 9156
 Niedoba, T., 11483
 Nidrach, R. J., 1640
 Nieh, C. E., 9779
 Niekerk, J. v., 5580
 Nielsen, A., 2305
 Nielsen, E. K., 12808, 14531
 Nielsen, E. L., 10718
 Nielsen, E. S., 14396
 Nielsen, H. E., 13268, 14943
 Nielsen, H. M., 15373
 Nielsen, M., 9509, 9510, 9511
 Nielsen, M., 9512, 16707, 16740
 Nielsen, N., 1397, 8580
 Nielsen, N. A., 401
 Nielsen, N. A., 402, 11193
 Nielsen, S., 10067
 Nielsen, A. L., 2305
 Nielsen, N. A., 400
 Nieschulz, O., 15979
 Niessing, K., 703, 4355
 Niethammer, A., 17431
 Niethammer, G., 16089
 Nieuwenhuis, G., 4255
 Nieuwenhuysen, F. J., 5489, 5659
 Nigrelli, R. F., 6795, 16019
 Niitsu, S., 962
 Niijama, E., 7119
 Nijdam, F. E., 5323, 14045
 Nikitin, A. A., 3169
 Niklewski, B., 17619, 17620
 Nikol'skii, V. V., 9094
 Nilsson, H., 13759
 Nims, L. F., 4013
 Nims, L. F., 7664, 12643
 Ninomiya, M., 6535
 Nippert, O., 11438
 Nisbet, H. B., 7780
 Nishimura, K., 17854
 Nishimura, M., 12905
 Nishioeda, M., 1187, 6601
 Nishiyama, I., 7098
 Nishiyama, S., 8154
 Nisi, H., 5859
 Nissen, N. I., 4235, 5820
 Nissenbaum, R. F., 7486
 Nissard, F. W., 12493
 Nitsche, H., 11486
 Nitzulescu, J., 11325
 Niven, C. F., 4699
 Niven, J. C., 4560, 6150
 Nixon, A., 7799
 Nixon, E. N., 11196, 12643
 Nixon, G. E. J., 14269
 Nizar, 16742
 Noack, K. L., 16183
 Noback, C. R., 5672
 Nobécourt, P., 1374
 Nobécourt, P., 11925, 14005
 Nobécourt, P., 15732, 15857
 Noble, F., 9572
 Noble, A., 11663
 Noble, G. K., 6980
 Noble, L., 7019, 8883, 18076
 Noble, L., 16825
 Noble, N. S., 3207
 Noble, R. L., 5139, 15929
 Noble, R. L., 3877
 Noble, R. L., 10870, 12491
 Noble, R. L., 16596, 16625
 Noble, T. A., 12643
 Nobles, H. L., 13672
 Nobre, A., 17970
 Nobrega, P., 11579
 Nobrega, P., 12263, 13461
 Noeken, H., 9327
 Noehren, W. A., 9155
 Noel-Davidson, D. M., 8795
 Noe-Nygaard, A., 5082
 Noetzel, H., 12836
 Noormaan, G., 2495
 Nolan, M. O., 10488, 10505
 Noll, W., 12308
 Nolte, A. J., 18970
 Nolte, H. W., 5051
 Nolte, H. W., 10452, 14132
 Nolte, H. W., 14133, 14247
 Noojin, R. O., 5650
 Nonopen, P., 2398
 Norburn, M. E., 14390
 Nordby, J. E., 16201
 Nordenskiöld, H., 14848
 Nordenson, N. G., 4252, 4318
 Nordgren, G., 15233, 15324
 Nordhagen, R., 2909, 5384
 Nordlund, I., 2709
 Nordström, T., 12906
 Nørregaard, F., 4259, 4260
 Noriega, del Aguila, M., 8487
 Norinder, E., 1932
 Norman, A. G., 17432, 17595
 Norman, C., 1135, 1136
 Norman, J. R., 3885, 12425
 Norman, H., 12349
 Norris, C. H., 14445
 Norris, F. H., 689
 Norris, K. R., 1832
 Norris, L. C., 2695
 Norris, L. C., 2696, 7450
 Norris, L. C., 9165, 9166
 North, M. O., 9825, 15122
 Northen, H. T., 10303
 Northen, H. T., 15722, 17691
 Northrop, J. H., 7272
 Northrup, D., 12643
 Northrup, D. W., 12907
 Norton, E. M., 5372, 10781
 Norval, I. P., 10324
 Notestein, F. W., 8962
 Notevart, O., 321
 Nöth, A., 11500
 Nothdurft, H., 12772, 12799
 Nöthlich, K., 14400
 Novak, M., 11684
 Novikova, N. G., 1194
 Novitskij, A. A., 16680
 Nowak, S. J. G., 254
 Nowak, S. J. G., 11075, 11076
 Nowinski, W. W., 16489
 Nowosad, F. S., 10306
 Noyes, F. B., 4307
 Noyes, H., 3370
 Noyes, H. J., 4307
 Noyons, E. C., 3645
 Nozawa, K., 3917
 Nubling, E., 18077
 Nugent, T. J., 3169, 15867
 Nugent, T. J., 15891
 Nukada, S., 882
 Nukada, S., 883, 9877, 9878
 Nukayo, C., 13497
 Numata, G., 8154
 Numata, I., 1920, 1921
 Nungester, W. J., 9860
 Nungester, W. J., 13442, 13462
 Nunn, L. C. A., 5478
 Nunn, L. C. A., 7441, 7447
 Nunnemacher, R. F., 9041, 14998
 Nussey, A. M., 1793
 Nutini, L. G., 1388
 Nuzum, F. R., 4092
 Nygaard, K. K., 4491, 7321
 Nylén, G., 2275
 Nylén, G., 7715, 11185

O

Oag, R. K., 8221
 Oakley, W. G., 2342
 Obal, F., 11151
 O'Bannon, L. S., 6476
 Oberdoerffer, M., 17379
 Oberdorfer, E., 3509
 Oberdorfer, M., 4661
 Oberdorfer, M. J., 11640
 Oberholser, H. C., 1646
 Oberholser, H. C., 5191, 7020, 14330
 Oberle, G. D., 1753
 Obiditsch, R. A., 7845
 O'Brien, B., 3742, 16542
 O'Brien, H. D., 17025
 Obsil, K., 15713
 O'Byrne, H. I., 10613
 Ocampo, A. R., 17076
 Ocfemia, G. O., 4978, 15828
 Ochiai, A., 4319
 Ochoa, S., 2261
 Ochsner, A., 13106, 16741
 Ockerblad, N. F., 9938
 O'Connell, H. V., 850
 O'Connor, B. A., 17857
 O'Connor, Sister M. C., 12726
 O'Connor, M. W., 6615
 O'Connor, R. C., 14574
 O'Connor, R. J., 2444
 Odell, H. R., 6077
 Oden, J. W., 14949
 Oden, L. H., 14949
 Odgers, P. N. B., 17042
 Odland, M. L., 12535
 Odland, T. E., 2952
 Odland, T. E., 5324, 8938, 13874
 Odlaug, T. O., 6796
 Odum, V., 3239, 17895
 Odum, V. L., 15971
 O'Donovan, D. K., 3878
 O'Donovan, D. K., 3887, 5609
 O'Dwyer, M. H., 15765
 Oechslin, C., 13545
 Oehler, E., 1754
 Oehlkers, F., 5325
 Oehser, P. H., 1685
 Oelkers, H. A., 7792
 Oelrichs, L., 801
 Oelrichs, L., 8191, 9829
 Oester, Y. T., 11240
 Oesterle, P., 2681, 11800
 Oesterlin, M., 11575
 Oestreich, F. A., 7310
 Oettel, H., 3591
 Oey, J. H., 5498
 Offenkrantz, F. M., 7596
 Offner, P., 12643
 Offendering, H., 15407
 Ogaard, A. T., 12855
 Ogata, D., 14733
 Ogata, M., 11106
 Ogata, T., 4492, 4493
 Ogawa, T., 7952, 7953
 Ogden, E., 2276
 Ogden, E., 7728, 14770
 Ogden, M. A., 11280, 17339
 Ogilvie, H. S., 150
 Ogilvie, L., 1472, 1478
 Ogiwara, K., 3227
 Ogle, C., 3668
 Ogle, K. N., 2214, 14708
 Ogukoni, H., 8154
 Oguma, K., 7191
 Ogura, K., 7160
 Ohashi, M., 11641
 Ohlmeyer, P., 5544
 Ohlsson, E., 1838
 Ohnell, R., 9172, 9265
 Ohta, K., 9266, 13054
 Ohta, T., 16509
 Ohwi, J., 1118
 Ohya, Y., 2874, 8426, 11871
 Ohya, Y., 16362, 16363
 Oikawa, S., 12826
 Oimone, Y., 1360
 Ojala, E. M., 15560
 Ojemann, J. G., 11801
 Oka, T., 3220
 Okabe, K., 12297
 Okabe, N., 4971
 Okabe, Y., 3228
 Okabe, Y., 3229, 6590, 8154
 Okada, Y., 1070
 Okada, Y., 754
 Okada, Y., 2183, 5960
 Okamoto, H., 13627
 Okamoto, Y., 13587
 Okamura, H., 10868
 Okamura, H., 10869, 11110
 Okamura, I., 5859
 Okay, R., 12263
 Okinaka, S., 4331
 Okino, T., 4204
 Okkels, H., 2424, 4286
 Oksala, T., 14352
 Okubo, K., 952
 Okumura, N., 408
 Okumura, R., 233
 Okutani, M., 9877, 9878
 Olafson, P., 15382
 Olah, G., 857, 2623
 Olaru, A., 12484
 Olbrich, S., 4536
 Olcott, C. T., 11551
 Oldham, H., 2037
 O'Leary, J. L., 12643
 Olesen, M., 4236
 Oleson, J. J., 2691, 7468
 Olitsky, P. K., 884
 Olitsky, P. K., 885, 13463, 15241
 Olitzki, L., 17305
 Oliver, C. P., 169544
 Oliver, E. S., 11853
 Oliver, R. W., 15714
 Oliver, S. J., 17790
 Oliver, W. R. B., 5192
 Oliver, W. W., 953
 Olivier, G., 2251
 Olivier, H. R., 6085
 Olivieri, L., 4364
 Olivo, O. M., 2473, 16998
 Ollswang, A. H., 17258
 Olmsted, J. M. D., 7079, 11135, 16681
 Olmsted, W. H., 9126
 Olson, C., 1353, 10787
 Olson, H. C., 356, 2166
 Olson, J., 13112
 Olson, M. W., 791
 Olson, M. W., 6022, 11513
 Olson, O. W., 10543, 12298, 14217
 Olson, O. W., 17906, 17942, 17943
 Olson, A., 2672
 Olson, C., 3249
 Olson, F. C. W., 2731, 6267
 Olson, F. R., 8092
 Olson, J. C., 17415
 Olson, O. E., 3508, 10197
 Olson, R. A., 1356
 Olson, S. F., 1882
 Olson, S. W., 6737
 Olson, T. A., 1071
 Olson, T. M., 775
 Olson, T. M., 780, 1195
 Olszycka, L., 18172, 18173
 Olt, A., 6243
 Olszcha, R., 11698
 O'Mara, J. G., 7102
 Omer-Cooper, J., 7086

- Ondraček, K., . . . 10107
 O'Neill, F. C., . . . 17264
 O'Neill, H. T., . . . 4770
 O'Neill, W. J., . . . 12175
 Onetto, E. A., . . . 4494
 Ono, S., . . . 8139
 Oordt, G. J. V., . . . 1611, 11111
 Oort, A. J. P., . . . 15807
 Oortwijn Botjes, J., . . . 14065
 Oosting, H. J., . . . 12594, 16252
 Opie, E. L., . . . 9879
 Opitz, E., . . . 8772
 Oppel, T. W., . . . 18040
 Oppenheimer, B. S., . . . 12643
 Oppenheimer, C., . . . 5462, 16329
 Oppenheimer, E. H., . . . 495
 Oppenheimer, G., . . . 17265
 Oppenheimer, H. E., . . . 11157
 Oppenheimer, J. M., . . . 8049
 Oppenheimer, M. J., . . . 4031
 Oppel, L., . . . 7892, 16946
 Oppermann, T., . . . 8324
 Oppers, K., . . . 4111
 Oppreanu, J., . . . 14960
 Opsahl, R., . . . 2277, 11293
 Orban, B., . . . 4306
 Ordal, E. J., . . . 17463
 Ordman, D., . . . 963, 8174
 Orkhevich, V. N., . . . 8560, 9096
 Orent-Kailes, E., . . . 7403, 9169
 Oreshkina, O. M., . . . 9100
 Orgain, E. S., . . . 6089
 Orgel, M. N., . . . 10921
 Orla-Jensen, S., . . . 4420
 Orlando, R., . . . 13800
 Orlov, J. A., . . . 5241
 OrNSTein, L. S., . . . 9469
 Orr, A. P., . . . 12629
 Orr, J. W., . . . 4617
 Orr, R. T., . . . 14900, 16874
 Orr, R. T., . . . 5193, 14312
 Orr, T. G., . . . 357
 Orskov, J., . . . 886
 Orskov, J., . . . 887, 2664
 Orten, J. M., . . . 7571
 Orth, F. W., . . . 10693
 Orth, O. S., . . . 409, 12643
 Ortiz, T., . . . 13130
 Ortlepp, R. J., . . . 6797
 Ortlepp, R. J., . . . 15987, 15988
 Ortmann, P., . . . 5469, 9104
 Orton, C. R., . . . 1448
 Orton, J. H., . . . 7240
 Osborn, C. M., . . . 2132, 14662
 Osborn, F. G. B., . . . 7209
 Osborn, H., . . . 15904
 Osborn, H. T., . . . 3128
 Osborn, H. T., . . . 3208, 3209
 Osborn, W. O., . . . 3860
 Osborne, L. W., . . . 8066
 Osborne, S. L., . . . 12643
 Osborn, M. R., . . . 5019, 5021
 Osgood, A. H., . . . 12739
 Osgood, E. E., . . . 7934
 Osgood, E. E., . . . 12739, 15005, 16822
 Osgood, F. L. Jr., . . . 5222
 Osgood, F. L. Jr., . . . 5280, 5242
 Osgood, M. W., . . . 15005, 16822
 Oshima, T., . . . 7954
 Oshinov, F. M., . . . 4694
 Oskamp, J., . . . 8504
 Osofsky, A. G., . . . 2532
 Ossowski, A., . . . 10365
 Oster, R. H., . . . 12643
 Osterberg, A. E., . . . 5504, 5617
 Osterberg, G., . . . 9480
 Osterberger, B. A., . . . 5037
 Ostergaard, J. M., . . . 14232
 Ostergaard, P. S., . . . 9815
 Osterhout, W. J. V., . . . 1365, 1392, 1393
 Osterhout, W. J. V., . . . 3071, 3076, 3077
 Osterhout, W. J. V., . . . 3095A, 4923, 10811
 Ostern, P., . . . 7685, 10985
 Osterwald, K. H., . . . 5777
 Osterwalder, A., . . . 1423
 Ostroff, R., . . . 13707
 Ostrom, C. E., . . . 13950
 O'Sullivan, M. E., . . . 9652
 Osuna, H., . . . 4331
 Oswald, E., . . . 12339
 Oszacki, A., . . . 631
 Oszast, Z., . . . 6156
 Otero, J. L., . . . 14066
 Otoda, T., . . . 7771
 Otsuki, C., . . . 1328
 Ott, E., . . . 2229
 Ottaviani, G., . . . 11378
 Ottaway, C. W., . . . 15002
 Otten, L., . . . 17186
 Otterstrom, C. V., . . . 8814
 Ottestad, P., . . . 1815, 1869
 Otto, G. F., . . . 4548, 10506
 Otto, H., . . . 13154
 Otto, J. H., . . . 1843
 Otto, J. S., . . . 7455
 Ottsen, M., . . . 7807
 Oudemans, A. C., . . . 12340
 Oudin, A., . . . 15668, 15669
 Ounsworth, L. F., . . . 1258
 Oura, G., . . . 16155
 Outhouse, J., . . . 7456, 11268
 Ouw, E. L., . . . 11366
 Overbeck, F., . . . 9026
 Overbeck, G. A., . . . 3886
 Overbeck, G. A., . . . 12983, 16916
 Overholser, E. L., . . . 13872
 Overman, O. R., . . . 15110
 Overstreet, R. K., . . . 10879
 Overstreet, R., . . . 12057
 Ovinge, A., . . . 3156, 14119
 Owen, C. A., . . . 10944
 Owen, C. A., . . . 11269, 16553
 Owen, C. I., . . . 7846
 Owen, E. C., . . . 7457
 Owen, F. V., . . . 6477
 Owen, J. B., . . . 8741
 Owen, R. D., . . . 16678
 Owen, S. E., . . . 9209, 16875
 Oxford, A. E., . . . 2758
 Oxner, M., . . . 8596, 11761
 Oxner, M., . . . 7265
 Oyamada, T., . . . 15692
 Oz, T. V., . . . 8140
 Ozaki, M., . . . 8154
 Ozorio de Almeida, M., . . . 11140, 14840
- P
- Paastela, J. E., . . . 8841
 Pace, D. M., . . . 177
 Pace, D. M., . . . 5103, 7244
 Pace, J., . . . 9821
 Pacheco, G., . . . 13464
 Pacheco, G., . . . 13465, 13628
 Paci, G., . . . 17309
 Pack, G. T., . . . 7847
 Packalen, T., . . . 1954, 14901
 Packer, A. C., . . . 12814
 Packer, D. M., . . . 7695
 Packer, D. M., . . . 10875, 10876, 15258
 Pada, B. S., . . . 6454
 Paddock, M. E., . . . 16184
 Paddock, F. K., . . . 14932
 Paddock, R., . . . 9605
 Padoa, E., . . . 5900
 Padwick, G. W., . . . 15458
 Paech, K., . . . 4927
 Paesler, F., . . . 14218
 Paetold, J., . . . 12700
 Paff, G. H., . . . 8050
 Pagán, F. M., . . . 4752
 Pagán, F. M., . . . 8419, 11843
 Page, E. W., . . . 5670
 Page, H. E., . . . 16677
 Page, I. H., . . . 3946
 Page, I. H., . . . 5483, 5486, 9527
 Page, I. H., . . . 11086, 12643, 13011
 Pagel, W., . . . 619, 7865
 Paget, H., . . . 17268
 Pagnini, U., . . . 2710, 11699
 Pagnurigan, D. B., . . . 4913
 Paillas, J., . . . 7472
 Paillas, J. E., . . . 14912
 Paine, H. S., . . . 13825
 Paine, W. G., . . . 5496
 Painter, E., . . . 12643
 Painter, R. H., . . . 6903
 Painter, T. S., . . . 7069
 Pal, Z. O., . . . 15938
 Palacios, R. H., . . . 4602
 Palacios Oosta, A., . . . 964
 Palant, B. L., . . . 888
 Palhinha, R. T., . . . 7080
 Palit, C. C., . . . 11342
 Palitschek, H. V., . . . 15537
 Palitz, L. L., . . . 7370
 Palley, N., . . . 1299
 Pallot, G., . . . 1411
 Palmer, A., . . . 17043
 Palmer, A. E., . . . 8485
 Palmer, C. E., . . . 992
 Palmer, E., . . . 15193
 Palmer, E. J., . . . 6381, 6436
 Palmer, L. S., . . . 1532
 Palmer, L. S., . . . 11481, 17091
 Palmer, M. A., . . . 12383
 Palmer, N., . . . 10955
 Palmer, R. S., . . . 3540
 Palmer, T. S., . . . 7038
 Palmgren, A., . . . 1119
 Palmiste, D. H., . . . 15889
 Palmquist, E. M., . . . 17713
 Palti, V., . . . 9157
 Paluch, J., . . . 8605
 Palumbi, G., . . . 11394
 Pamfil, G., . . . 194, 336
 Pampana, E. J., . . . 8702
 Pampanini, R., . . . 13775
 Paná, C., . . . 6184
 Panayotopoulos, . . . 348
 Pandalai, K. M., . . . 8348
 Pang, K. H., . . . 8215
 Pang, K. H., . . . 11654, 13466
 Pannier, R., . . . 9687
 Panning, A., . . . 12332
 Panse, V. G., . . . 73
 Pansini, G., . . . 14184
 Pantaleoni, M., . . . 16874
 Paola, G. di., . . . 14643
 Papageorgiu, S., . . . 6086
 Papanicolaou, G. N., . . . 9354, 12990
 Pape, H., . . . 14098
 Papehuss, E. J., . . . 5971
 Pappenheimer, A. M., . . . 11026
 Pappenheimer, A. M., . . . 8629
 Pappenheimer, J. R., . . . 11554
 Pappenheimer, J. R., . . . 13464, 13465
 Parade, S. W., . . . 5355
 Paradise, C. G., . . . 10736
 Paranjape, A. S., . . . 4146
 Parde, L., . . . 3027
 Parde, M., . . . 3027
 Pardi, L., . . . 13846
 Parent, H., . . . 15944
 Parent, O., . . . 14256
 Parente, E., . . . 15670
 Parfitt, E. H., . . . 10064
 Parham, B. E. V., . . . 1196, 1197, 1259
 Parhon, C. C., . . . 539
 Parhon, C. I., . . . 11352
 Parish, H. E., . . . 5058, 5061
 Parish, H. J., . . . 4551, 16141
 Park, J. M., . . . 2667
 Park, M., . . . 8628, 8629
 Park, M., . . . 13688, 14053, 14074
 Park O., . . . 10772
 Park, T., . . . 16249
 Parker, E., . . . 3631, 9647
 Parker, E. A., . . . 3103
 Parker, E. R., . . . 1260
 Parker, F. Jr., . . . 3879
 Parker, G. H., . . . 3937
 Parker, G. H., . . . 8869, 11083
 Parker, G. M., . . . 12796
 Parker, H. W., . . . 14290
 Parker, J. F., . . . 11517
 Parker, J. M., . . . 2667
 Parker, K. G., . . . 15811
 Parker, M. E., . . . 13684
 Parker, M. V., . . . 6967
 Parker, M. V., . . . 6975, 10722
 Parker, M. W., . . . 4928, 10318
 Parker, R. C., . . . 8051
 Parker, R. F., . . . 6087
 Parker, R. L., . . . 10396
 Parker, R. L., . . . 10397, 10398, 10399
 Parker, R. N., . . . 10265
 Parker, R. R., . . . 4599
 Parker, S., . . . 12643, 16776
 Parker, W. E., . . . 12727
 Parker, W. S., . . . 15921
 Parkes, A. S., . . . 9291, 12491
 Parkin, E. A., . . . 5052
 Parkins, A. E., . . . 12685
 Parks, G. H., . . . 7021
 Parks, T. H., . . . 3185, 10385
 Parlatto, S. J., . . . 6088
 Parmenter, R., . . . 7088, 12843
 Parnas, J. K., . . . 7685
 Parpart, A. K., . . . 2255
 Parr, A. E., . . . 3521
 Parr, L. W., . . . 2771
 Parr, L. W., . . . 8801, 17464
 Parrack, H. O., . . . 12843
 Parran, T., . . . 17340
 Parras, V., . . . 15671
 Parris, G. K., . . . 14067, 15889
 Parrish, D. B., . . . 1977, 2510
 Parrot, J. L., . . . 5514, 5778
 Parsons, B. L., . . . 10211
 Parsons, C. G., . . . 16823
 Parsons, C. H., . . . 9895
 Parsons, F. E., . . . 14298
 Parsons, L. D., . . . 599
 Parsons, P. B., . . . 13609
 Parsons, R. J., . . . 701, 3643
 Parsons, T. H., . . . 1261, 1338
 Parthasarathy, N., . . . 5290
 Partington, P. F., . . . 16627
 Partridge, N. L., . . . 13903
 Partridge, R. C., . . . 16583
 Partridge, S. M., . . . 17183
 Parvis, D., . . . 8141
 Paschall, A. H., . . . 2971
 Paschick, K. E., . . . 3880
 Pasco, R. E., . . . 6503
 Paskevsky, V., . . . 12397
 Pasqualino, A., . . . 11895
 Pasteels, J., . . . 736
 Pastore, J. B., . . . 16664
 Pastorius, G. J., . . . 18178
 Paaveer, A., . . . 16314
 Patch, E. M., . . . 14261
 Patch, L. H., . . . 14120
 Patek, P. R., . . . 7942
 Patel, M. K., . . . 4972
 Paterson, D. D., . . . 7172
 Paterson, J. S., . . . 4716
 Paterson, J. W., . . . 13826
 Paterson, N. F., . . . 11379
 Patocka, F., . . . 17465
 Paton, R. R., . . . 10763
 Patras, M. C., . . . 11024
 Patrick, M., . . . 10957
 Patrick, R., . . . 18723
 Patrick, S., . . . 8626
 Patrick, S. H. M., . . . 5389
 Patt, M., . . . 438
 Patten, B. M., . . . 9760
 Patterson, C. A., . . . 2107
 Patterson, N. A., . . . 10400
 Patterson, T. L., . . . 2108
 Patton, A. R., . . . 11030, 12643
 Patton, W. B., . . . 7597
 Patton, A. R., . . . 2509
 Patton, A. R., . . . 11487, 14552, 17392
 Patton, C. P., . . . 5243
 Patton, P. B., . . . 3607, 7326
 Patton, R. L., . . . 13025
 Patty, F. A., . . . 15305
 Patwardhan, V. N., . . . 309, 16566
 Paul, A. A., . . . 1596
 Paul, J. R., . . . 15582
 Paul, J. R., . . . 13584, 17377
 Paul, L. C., . . . 1496
 Paul, S., . . . 303
 Paul, W. D., . . . 3732
 Paul, W. R., . . . 13827
 Paul, W. R., . . . 14075, 14099
 Pauli, R. H., . . . 2377
 Paulian, M. R., . . . 14248
 Paulian, R., . . . 5134
 Paulian, R., . . . 8776, 12350
 Pauli-Magnus, . . . 4680, 9880
 Paulsen, C., . . . 6119
 Pavari, A., . . . 8897, 10266
 Pavarino, G. L., . . . 1202
 Pavcek, P. L., . . . 3727
 Pavisic, . . . 1833
 Pavlov, P., . . . 12259, 12299
 Pawan, J. L., . . . 6170, 18575
 Paya, P., . . . 16113
 Payne, S. A., . . . 386
 Payne, V., . . . 996
 Payne, W., . . . 2110
 Paytash, P. L., . . . 13178
 Pazzini, A., . . . 1520
 Peabody, E. B., . . . 9794, 16682
 Peace, T. R., . . . 15888
 Pearce, G. W., . . . 1491
 Pearce, J., . . . 1800
 Pearl, M. D., . . . 5279
 Pearl, R., . . . 433
 Pearl, R., . . . 3486, 5279, 12313
 Pearlman, M. D., . . . 7998
 Pearce, A. S., . . . 5376
 Pearce, A. S., . . . 6798, 15989
 Pearce, H. E., . . . 16900
 Pearson, A., . . . 15066
 Pearson, B., . . . 5808
 Pearson, B., . . . 5814, 9602
 Pearson, C. S., . . . 1223
 Pearson, E. S., . . . 1816
 Pearson, E. S., . . . 1817, 8891
 Pearson, E. S., . . . 8973, 17466
 Pearson, G. H., . . . 8703
 Pearson, M. M., . . . 17269
 Pearson, N. L., . . . 15561
 Pearson, P. B., . . . 9232, 16364
 Pearson, Y., . . . 13414
 Peacock, J., . . . 10959
 Pease, D. C., . . . 4398
 Pease, D. C., . . . 5972, 14750
 Peaston, H., . . . 14185
 Pechuman, L. L., . . . 1624, 15811
 Peck, R. L., . . . 17323
 Peck, S. M., . . . 972
 Pecorella, F., . . . 11326
 Pedace, E. A., . . . 4295
 Pedace, E. A., . . . 7912, 14922
 Pedelaborde, J. L., . . . 10749
 Pedelty, W. H., . . . 10986
 Pedersen, H. O., . . . 12260
 Pedersen, K. C., . . . 4249
 Pedersen-Bjergaard, K., . . . 3881
 Pederson, C. S., . . . 1020, 1032, 2729
 Pederson, K. O., . . . 2537
 Pedracine, H., . . . 9053, 14409
 Peebles, R. H., . . . 1137
 Peele, T., . . . 15230
 Peele, T. C., . . . 2744
 Peer, L. A., . . . 9605
 Peers, J. H., . . . 11294
 Peery, T. M., . . . 2108, 16876
 Peirce, C. B., . . . 13310
 Pelczar, M. J., . . . 2650
 Pellegrin, F., . . . 1138
 Pellegrin, F., . . . 2843, 8437
 Pellegrin, J., . . . 6968
 Pellegrini, C., . . . 6313
 Peller, S., . . . 4216, 7848
 Pellet, F. C., . . . 1534
 Pellissier, F., . . . 11926
 Peltier, G. L., . . . 14100, 17467
 Peltier, M., . . . 8142
 Pelzer, R. H., . . . 541
 Pemberton, C. E., . . . 8186
 Pemberton, C. E., . . . 3191, 8304
 Pemberton, R., . . . 10935
 Penfound, W. T., . . . 12588, 12595
 Penn, R. E., . . . 11965
 Pennanach, J., . . . 18605
 Pennebaker, F., . . . 5377
 Pennell, F. W., . . . 11895
 Penner, A., . . . 14582, 14583
 Penner, B. J., . . . 9659
 Pennett, G., . . . 11327
 Pennington, W., . . . 11846
 Pennycuik, S. W., . . . 11665
 Pennypacker, M. I., . . . 60
 Penrose, I. S., . . . 2414
 Penso, G., . . . 2772, 8143, 8607
 Penstermacher, R., . . . 17906
 Pentsik, A. S., . . . 4298
 Pentzer, W. T., . . . 17848
 Pepper, B. B., . . . 12199
 Pepper, D. S., . . . 13547
 Pepper, J. H., . . . 17888
 Pepper, O. H. P., . . . 9618
 Pequeno, E. A., . . . 1568, 14192
 Péragnot, H., . . . 14591
 Périgallo, I., . . . 5582
 Peralta, F. de., . . . 8201, 8202
 Perdrau, J. R., . . . 889, 10089
 Pereira, J., . . . 5485, 5849
 Pereira, R. S., . . . 11474
 Perel, M., . . . 2598, 2599
 Perel, L., . . . 16755
 Peres, O., . . . 17895
 Pérez, J. N., . . . 13628
 Peretti, G., . . . 9464
 Perham, A. N., . . . 10267
 Perkel, I. D., . . . 890
 Perkins, A. E., . . . 2494
 Perkins, S. E., . . . 2496, 6005
 Perkins, S. E., . . . 6478, 8089
 Perkins, E. B., . . . 1670
 Perkins, S. E. 3rd., . . . 1647
 Perkins, S. O., . . . 2972
 Perkins, S. O., . . . 6503, 11960
 Perkins, W. H., . . . 15325

- Perla, D. 3882, 9367, 10846
11242, 12847, 13244
Perles, S. 4244, 5880
Perley, A. M. 527
Perligut, L. E. 3211
Perlman, L. 7448
Perlow, S. 9558
Pern, S. 7665
Perotti, R. 11801
Perreau, P. 11819
Perrett, G. 9747
Perrier de la Bathie, H. 2836A
Perrin, H. 15672
Perronico, G. 2447, 4352
Perry, A. C. 11659
Perry, C. A. 8271, 17457
Perry, D. H. 17657
Perry, H. S. 14362
Perry, I. H. 387
422, 16877
Perry, J. C. 15889
Perry, L. M. 11868, 11892
Pershing, C. O. 10388
Persike, E. C. Jr. 3796
Persing, C. O. 14105
14110, 15894
Person, L. H. 3169
Personius, C. J. 1026
1027, 15793
Pescatore, J. A. 5744
Peschen, E. 212
Peschen, K. E. 12809
Peshkin, M. M. 17187
Peshkin, J. C. 438
Pesola, V. A. 13828
13829, 13830
Pessin, L. J. 3510
Pessin, S. B. 600
Petch, C. E. 17839
Petch, T. 11822
Petcut, M. 3196, 15673
Peter, K. 11444
Peters, H. G. 5499
Petersman, M. G. 14683, 15242
Peters, B. G. 12261
Peters, C. M. 11243
Peters, G. 8646, 14736
Peters, H. C. 3761, 12643
Peters, H. N. 2184, 2185
Peters, J. P. 7520
Peters, R. A. 7449, 7482
Petersen, B. 13610
Petersen, W. E. 17082, 17083
Peterson, E. 5194
Peterson, E. H. 6244, 11749
Peterson, G. M. 8994
Peterson, R. T. 12439
Peterson, V. E. 7376
7404, 14507, 14684
Peterson, W. E. 2162
Peterson, W. H. 272, 2749, 3727
6260, 6311, 6318
8092, 11770, 15898
16522, 17068, 17470
Peterson, W. J. 14770
2510, 6011
Pethybridge, G. H. 8633
Petitjean, A. M. 14323
Peto, F. H. 5291, 12536
Petran, E. 8271
Petravicz, W. F. 3836
Petri, S. 4260
Petrie, A. H. K. 4944
8590, 15700
Petrik, F. 15284
Petrik, F. G. 9999
Petrinosi, G. 3046
Petrova, N. G. 2280
Petrovskaja, B. 11047, 16800
Petrusewicz, K. 6864
Pette, H. 7866
Pette, J. W. 4688
Petersson, A. 9881, 9882
Pettit, A. E. J. 10054
Pettingill, O. S. Jr. 10645
Pettit, H. 15261
Petzsch, H. 12453
Pevalek, I. 16142
Peyerimhoff, P. de 12351, 12352
Peyron, A. 13467
15088, 16878
Peyronel, B. 13735
Pfaff, G. 15173
Pfahler, F. 6569
Pfaler, E. v. 14853
Pfankuch, E. 8613
Pfeffer, A. 1301, 2602
Pfeiffer, C. 13178, 16808
Pfeiffer, C. A. 609
3883, 12966
Pfeiffer, H. 7092
Pfeiffer, H. H. 1728
Pfeiffer, N. E. 17507, 17695
Pfeiffer, R. 1794
Pfeiffer, R. L. 14473
Pfister, J. 17925
Pfirschke, J. 13789, 17744
Pfister, M. O. 2327
Pfaum, D. J. 2421, 9559
Pflugfelder, O. 12980
Pfuhl, W. 4356
Phatak, N. M. 13178
Phelps, A. S. 15398
Phelps, D. 3884, 9653
Phelps, K. 12643
Phelps, K. R. 12643
Philip, C. B. 1564
4681, 10025
Philip, U. 1779
Philippis, A. de. 8540
Philippot, E. 13146, 16764
Philippis, D. J. 6543
Philips, E. P. 10147
Philipsz, I. O. 2630
Philipp, P. 6904
Philips, A. M. 16466
Phillips, E. W. J. 3197
Phillips, H. M. 2875
Phillips, J. H. 12262
Phillips, P. H. 324, 650
2061, 9226, 13178
14542, 15107, 16523
Phillips, R. A. 11392, 12643
Phillips, R. G. 16044
Phillips, R. W. 3467
Phillips, W. R. 1262
12096, 17637
Phillips, W. W. A. 6935
Phillis, E. 12200
Philp, J. 5292
10730, 16190
Philpot, F. J. 5463
Philson, P. J. 15437
Phippard, E. F. 5527
Phipps, I. F. 1479
Piatt, J. 755, 11375
Pic, M. 3329
14249, 16031
Piccoli, L. J. 16801
Piché, L. 16281
Pichler, W. 10808, 12613
Pick, E. P. 11221
Pickels, E. G. 232, 233
489, 2624, 2627
Pickens, A. L. 1636
Pickering, E. 12493
Pickett, B. S. 15805
Pickett, T. A. 4874
Pickett, W. F. 15606
Pickford, M. 7557
Pickles, A. 14147
Pickoff, F. L. 11666
Pickrell, K. L. 625, 9883
Pickwell, G. 10634
Picqueneard, C. 17512
Piebenga, H. T. 8023
Piebmeisel, R. L. 5385
Piepho, H. 2473
5145, 12981, 13347
Pieraccini, G. 14991
Pierantoni, V. 6750
Pierce, G. N. Jr. 6744
Pierce, G. W. 5244
Pierce, H. B. 6751
Pierce, W. C. 5020
Pierce, W. D. 3487, 5069
Piéron, H. 11120, 11129
Pierpont, R. L. 12236
Pierquin, L. 13279
Pierret, R. 7286
Piersol, G. M. 8884
Piereson, H. 4217, 13083
Piereson, P. 14885
Piereson, P. H. 13245
Pierstorff, A. L. 17764
Piery, M. 479
Pietschmann, V. 3887, 8815
Pigorini, L. 3000
Piguet, G. A. 2934
Pijanowski, E. 6006
Pijl, L. van der. 7210
Pijon, M. 217
Pijper, A. 3203
Pijper, A. 12643
Pike, F. H. 12643
Pikkarainen, J. 2651
Piland, J. R. 1354
Pilar Rodrigo, A. del. 6423
2812
Pilat, A. 8404, 11823
Pilcher, F. Jr. 7849
Pilger, 2865
Pilger, R. 2828
10148, 15506
Pilla, R. 12489
Pillai, S. C. 4689
Pillmer, L. 891
927, 4346, 6048
Pillsbury, D. M. 9613
Pinckard, J. A. 3142
6656, 6682
6683, 8680
Pincus, G. 12643, 17052
Pincus, P. 5456
11427, 15036
Pincussen, L. 3659
Pinness, G. 17154
Piney, A. 645
Ping, C. 10565
11141, 11142
Pink, H. 13097
Pinkston, J. L. 13178, 14841
Pinkston, J. O. 13178, 14841
Pinkus, H. 15033
Pinner, M. 16897
Pinto, A. 3971, 7974
Pinto, C. 1565
1566, 3283
Pinto, S. S. 1938
Pirie, A. 8204
Pirie, N. W. 1488, 4974
4975, 15151, 15152
Pirodda, A. 2625
Pirone, P. P. 3169
Pirosky, I. 892, 893
Pirschle, K. 6562
10315, 16185
Pirson, A. 12058
Pistor, H. J. 13678
Pisu, I. 13468
13611, 13612, 13738
Pisu, I. B. 11552
Pitman, C. E. S. 14290
Pitman, E. J. G. 8974
16222, 16223
Pitner, G. 4668
Pitney, E. H. 15343
Piton, L. 6940, 8555
Pitot, A. 2910
Pittioni, B. 18029
Pittman, M. 804, 16512
Pittman, M. S. 5520, 5522
Pitts, R. F. 9405
12643, 12925, 12926
Pitt-Schenkel, C. J. W. 127
Pixell, G. H. 12288
Pizzillo, G. 8183
8704, 15967
Pizzolato, P. 9355, 16476
Plagge, E. 3885
12932, 12982, 16198
Plagge, J. C. 3972
Plakidas, A. G. 3169
Plamenevskii, M. N. 16245
Planet, N. 9830
Plank, H. K. 10453
Plankenhorn, E. 10329
Planques, 13131
Plass, E. D. 3626
Plass, M. 14446
Plastridge, W. N. 8242, 17393
Platenius, H. 13813, 13898
Platonov, G. P. 16282
Platon, E. S. 11553
Platt, A. E. 4495, 9384
Platt, A. P. 10988
Platt, E. D. 15964
Platner, E. B. 12643
Platner, P. 8563
Platner, P. A. 3904
3906, 12047, 12050
Platts, N. G. 12218
Platz, B. R. 5547, 16526
Plavsić, S. 2826
Plehn, M. 2711
Plessis, S. J. du. 1459, 15808
Plimmer, R. H. A. 10975
Plischke, H. 5935
Pliszka, F. 8165
Plomley, N. J. B. 6706
Plott, H. 15440
Plotz, M. 14771
Plum, M. 12556
Plum, N. 4237
Plum, P. 4253
Plummer, A. J. 13178
Plummer, F. B. 10555
Plummer, H. 4496
Plummer, H. J. 10529
Plummer, N. 17270
Plunkett, R. E. 13649
Pobeguinn, T. 1416
Pösch, G. 894
Pochon, J. 2565, 13673
Pocock, M. A. 8378
Podestà, H. H. 11019
Podhorsky, J. 8541
Poe, C. F. 9447
Poe, E. 9447
Poelnitz, K. V. 6424
Poesch, G. H. 3063, 6516
Pohjakallio, O. 15562
Pohl, F. 17658
Pohl, G. 4682
Pohl, I. S. 12786
Pohl, L. 7793
Pohle, A. 600
Pohle, F. J. 255
423, 1989
Pohlman, A. G. 2215
Pohlner, A. 4574
Poldexter, H. A. 9911
Poisson, R. 3343
12379, 12380
Polderevskii, S. D. 9127
Polderboer, E. B. 18078
Poleff, 8205
Poleff, L. 13576
Policard, A. 11367
11368, 13231
Politi, L. 1028, 1029
Polk, H. D. 17112
Pollack, E. 2029, 2030
Pollak, F. 11244
Pollia, J. A. 11295
Pollister, A. W. 8918, 8919
9518, 5627
Pollock, J. H. 14734
Pollock, L. J. 5445
Pollok, H. 7245
Polonovski, M. 12787
10847, 10922, 12787
14510, 14511, 14512
Polster, H. 6604
Polunin, N. 10162
Pomales-Lebrón, A. 15155
Pomerantz, L. 9552
12643, 13178, 14999
Pomerleau, R. 1424
Pomeroy, B. S. 11733
Pommerenke, W. T. 9177
Ponce de Leon, S. 6205
8249, 11644, 13620
Poncy, R. 8842
Ponder, E. 3631
7329, 12763
Pons, C. A. 17156, 17310
Ponse, K. 5624, 5625
Ponsold, A. 13524
Pont, J. W. 9027
Ponteva, E. 4287
Ponthus, P. 479
Ponzo, A. 13749
Pool, L. J. 7598
Pool, C. L. 11357
Pool, D. 3487
Poole, C. E. L. 5344
Poole, C. F. 5326
Poole, E. L. 5222
Poole, R. F. 5038, 15799
Poos, F. 9560
Pooth, P. 17379
Pop, A. 13469
Pope, C. G. 4497, 17188
Pope, C. H. 16060
Pope, E. C. 4332
Popenoe, P. 1795
Popesco, M. 14842, 14842A
Popham, W. L. 3169
Popják, G. 10900
Popoff, M. 17027
Popova, E. M. 4694
Popp, H. W. 14012, 15754
Poptsova, A. I. 9099
Porchet, B. 6269
Porges, N. 2725
Poris, E. G. 690
Porjé, I. G. 16928
Porrati, R. 9196
Porsild, A. E. 13776
Porte, W. S. 15888
Porter, A. M. 12535
Porter, C. L. 16121
Porter, D. A. 17907, 17908
Porter, D. R. 1482
Porter, E. E. 11554
Porter, E. H. Jr. 2186
Porter, J. 7515
Porter, J. A. 7742
Porter, J. E. 7517, 15239
Porter, J. M. Jr. 2187
2239, 7623
Porter, J. R. 2761
Porter, M. R. 2047
Porter, R. H. 1478
1480, 2958
Porter, W. T. 12643
Porterfield, W. M. 7093
Portes, L. 13041
Portier, P. 10832
Portman, R. 13030
Portmann, U. V. 13623
Porto, A. 16623
Porto, F. lo. 6290
Porto, J. 7986
Porush, I. 1917
Posey, L. O. 9414, 12643
Post, E. 3047
Post, T. B. 5327
Postma, N. 7686, 9498
Postma, W. P. 10328
Postmus, S. 14519
Poston, M. A. 6089
6148, 9996, 13609
Poston, R. F. 8287
Potapov, P. E. 14026
Pote, T. B. 3250
Potel, K. 4683, 8325
Potop, I. 11325
Pottenger, F. M. 13191
Pottenger, F. M. Jr. 9356, 13191
Pottenger, R. T. 16902
Potter, C. 3192
Potter, E. L. 11112
Potter, G. E. 11
Potter, T. S. 11691, 13708
Potter, V. R. 3704
Potts, S. E. 5053
14134, 17889
Pötzger, J. E. 3511, 10757
Poulsen, E. 895, 1978
Poulsen, E. M. 1870, 1871
Poulton, E. P. 284
Poumeau-Delille, G. 13467
Pourbaix, Y. 16519
Poursines, Y. 6194
Povitzky, O. R. 6090
Povolotzki, P. K. 13831
Powell, E. B. 13361
Powell, H. M. 896, 11555, 12552
13470, 17189, 17271
Powell, N. B. 16609
Power, M. H. 5854
7564, 12643
Powers, E. B. 370
3276, 7371, 10810
Powers, G. F. 12224
Powers, G. F. 7088
Powers, W. L. 4935
Poyet, E. 13178
Poynter, H. 15023
Poynton, J. O. 5094, 6752
Prabhu, S. S. 16202
Pradhan, S. 2478A
Prado, E. G. 4453
Prado, M. Lef. 4498
Prakken, R. 1755
Prat, S. 14315
Prather, P. F. 15137
Pratje, A. 9748
Prato, G. S. 10959
Pratt, C. L. G. 7432

- Regno, F. del. . . . 7262
9098, 16309
Regteren Altena, O. V. . . . 16010
Rehaut, . . . 8326
Rehberg, P. B. . . . 7291
Rehder, A. . . . 10681
10708, 15486
Rehder, H. A. . . . 10566
Rehm, W. S. . . . 15756
Rehn, J. A. G. . . . 8892
Rehn, J. W. H. . . . 12409
Reich, K. . . . 5104
Reichel, H. A. . . . 17192
Reichel, L. . . . 6612, 8334
Reichel, W. . . . 14028
Reichelt, H. . . . 6387
Reicheneder, F. . . . 15687
Reichenow, E. . . . 15980
Reichert, E. F. . . . 3810
Reichert, F. L. . . . 12908
Reichle, H. S. . . . 17278
Reichstein, T. . . . 2077, 3891, 3892
3898, 3894, 3895
3918, 3919, 7743
Reid, C. . . . 16481
Reid, C. G. . . . 7451
Reid, D. E. . . . 9409
Reid, J. . . . 4471
Reid, J. D. . . . 6193
Reid, J. J. . . . 1030
17815, 17819
Reid, L. C. . . . 12643, 13178
Reid, M. A. . . . 11143
Reid, M. E. . . . 3089
Reid, R. D. . . . 6097
15206, 17273
Reider, R. F. . . . 4499, 17344
Reiher, H. . . . 234
Reihlen, H. . . . 15694
Reihles, R. . . . 15788
Reilly, J. . . . 13860
Reilly, W. A. . . . 5860
Reimann, H. A. . . . 9971, 17287
Reimann, S. P. . . . 7595, 9427
Rejmer, L. . . . 646, 4149
Reimers, H. . . . 6871
10149, 11844
Rein, H. . . . 5533
Reindell, H. . . . 4102
7744, 7745
Reinecke, H. . . . 12882, 16557
Reinecke, R. M. . . . 14520
Reineke, E. P. . . . 7376, 14684
Reiner, L. . . . 5780
Reiner, M. . . . 11273
Reiners, H. . . . 388, 3762
Reinert, M. . . . 14848
Reinhart, E. G. . . . 12373
Reinhart, H. L. . . . 16567
Reinié, L. . . . 13450
13568, 13569, 13570
Reinke, E. E. . . . 9357
Reinmuth, W. . . . 8334
Reinstein, H. . . . 16377, 16378
Reinwaldt, E. . . . 153
Reis, J. . . . 11579
12263, 13461
Reiser, M. . . . 5573
Reiser, R. . . . 9188
Reising, F. . . . 11476
Reissinger, A. . . . 17028
Reiter, B. . . . 2431
Reithel, F. J. . . . 6517
Reitler, R. . . . 4500
Reitz, W. W. . . . 1223
Relwies, A. L. . . . 12651
Relwicz, A. L. . . . 12652
Remane, A. . . . 6820
Remete, T. . . . 13603
Remington, J. W. . . . 12952
Remington, R. E. . . . 268, 3723
Remlinger, P. . . . 9952
10439, 17193
Remy, E. . . . 922, 9175
Renander, A. . . . 2406
Rendahl, H. . . . 10631
Rendtorff, R. O. . . . 5062
Renger, C. A. . . . 10347
Renfrew, A. G. . . . 16778
Renner, E. A. . . . 14185
Renner, O. . . . 7103
Renqvist-Reenpää, Y. . . . 9465
Rensburg, H. J. v. . . . 9014
Rensch, B. . . . 6825
Renshaw, F. . . . 11216
Renshaw, R. J. F. . . . 13150
Rentschler, H. C. . . . 4717
Rentz, E. . . . 5596, 7795
Renzo, D. . . . 2566
Reploh, H. . . . 899, 3896
Respert, R. R. . . . 10386
Reschia, C. . . . 2570
Resende, F. . . . 12508
Resnichenko, M. S. . . . 3094, 9099
2451, 7987, 7988
Resta, L. S. . . . 1729
2451, 7987, 7988
Rettger, L. F. . . . 2759
2760, 13701
Retzlaff, E. G. . . . 14556
Reuszer, H. W. . . . 17433
Reuter, F. . . . 5299
Reuter, J. . . . 15924
Reuther, W. . . . 13866
Rey, E. M. F. . . . 5966
Rey, F. G. . . . 5861
Rey, P. . . . 13045
Reyer, W. . . . 973
Reyes, L. J. . . . 8542
Reymann, G. O. . . . 15268
Reynaud-Beauverie, Mme. J. B. . . . 10702
Reyne, A. . . . 6826
Reynes, V. . . . 9386
Reynolds, E. R. . . . 7724
Reynolds, E. S. . . . 15715
Reynolds, H. E. . . . 9449
Reynolds, L. . . . 9262, 16568
Reynolds, S. R. M. . . . 9394
12643, 14685
Reynoldson, T. B. . . . 6217
Režek, A. . . . 7433
Reznikoff, P. . . . 16432
Rezzesi, D. F. . . . 13218, 13219
Rhamy, B. W. . . . 7381
Rhea, L. J. . . . 7874
Rhinelander, F. W. 2nd. . . . 2278
Rhoades, M. M. . . . 1743
5331, 7133
Rhoades, R. . . . 374
Rhoades, V. H. . . . 7133
Rhoads, A. S. . . . 15878, 17302
Rhoads, C. P. . . . 16421, 16347
Rhoads, J. E. . . . 7521, 16441
Ri, T. . . . 16804, 16805
Ribaut, H. . . . 1627
Ribéreau-Gayon, . . . 6270, 8335
Ricardo, A. K. . . . 11756
Ricca, O. . . . 13147
Ricca, R. A. . . . 16303
Rice, C. E. . . . 2579
Rice, C. O. . . . 9154
Rice, E. E. . . . 16482
Rice, H. V. . . . 871, 14317
Rice, J. L. . . . 11700
Rice, L. . . . 13629
Rice, M. A. . . . 4738
Rice, R. V. . . . 544
Rice, T. B. . . . 9972
Rich, A. R. . . . 2328, 17313
Rich, G. T. . . . 13236
Richard, A. . . . 13177
16702, 16806
Richard, M. . . . 5246
Richard, R. . . . 13069
Richards, A. N. . . . 5660
Richards, A. V. . . . 8505
Richards, E. H. . . . 17434
Richards, H. G. . . . 12316
Richards, L. A. . . . 10758
Richards, M. B. . . . 3715
Richards, O. W. . . . 12466, 12643
Richards, P. . . . 2628
Richards, P. W. . . . 16263
Richards, R. L. . . . 3819
Richards, R. R. . . . 1844
Richardsen, A. . . . 6008
Richardson, A. P. . . . 5513
10925, 10926
11245, 13178
Richardson, C. H. . . . 12237
Richardson, F. . . . 5196
Richardson, F. L. . . . 17909
Richardson, G. A. . . . 8082
Richardson, J. C. . . . 13246
Richardson, J. S. . . . 7900
Richardson, L. R. . . . 8817
Richardson, M. . . . 6754
Richardson, L. E. . . . 10646
Richee, W. R. . . . 13825
Richer, A. C. . . . 15564, 15571
Richou, . . . 8120
Richter, C. E. . . . 9994
Richter, C. P. . . . 3728, 5695, 9358
9359, 9466, 9490
12643, 14549, 16525
Richter, D. . . . 293
Richter, F. . . . 12103, 17106
Richter, H. . . . 5597
5781, 8896
Richter, H. A. . . . 13578
Richter, O. . . . 11335
Richter, R. . . . 4148, 11422
Ricker, P. L. . . . 11910
Ricker, W. E. . . . 138
139, 5406
Ricketts, E. F. . . . 7072
Ricketts, H. T. . . . 545
Riddell, A. R. . . . 2422, 11369
Riddle, O. . . . 7534
12977, 16589
Riddle, W. J. . . . 1797
Rideal, E. K. . . . 16305
Ridout, J. H. . . . 12643, 14440
Ridout, J. J. . . . 302
Rieschert, W. . . . 14849, 16807
Riede, W. . . . 11786
Riedel, H. . . . 7572, 10927
Riedel, P. A. . . . 15216
Riegel, B. . . . 16387
Riegel, O. . . . 7521, 11084
Riehm, E. . . . 10878
Riemann, H. . . . 2461
Riemerschmid, G. . . . 10762
Riemsdijk, M. v. . . . 8272
Rienhoff, W. F. Jr. . . . 7852
Ries, E. . . . 770
Ries, H. . . . 14317
Riesenhof, E. A. . . . 563
Rietsema, I. . . . 17840
Riezler, H. . . . 12412, 12413
Rife, D. C. . . . 1798
Rifenburgh, S. A. . . . 10736, 10737
Riffart, H. . . . 8556
Rigby, W. . . . 9930
Rigdon, R. H. . . . 4501, 4502
Riggio, G. . . . 6092
Rigler, N. E. . . . 13814
Rigney, H. W. . . . 665
Rijlant, P. . . . 14602, 14603
Rijnberk, G. . . . 235
Riker, A. J. . . . 8169
10856, 17765
Riley, D. P. . . . 4976
Riley, G. A. . . . 3524
Riley, G. M. . . . 425
10723, 13246
Riley, H. P. . . . 4771
Riley, J. H. . . . 1648, 10647
Riley, N. D. . . . 10682
Riley, W. A. . . . 6704
6755, 15969
Rimbach, A. . . . 4772
Rimington, C. . . . 5998
6246, 10928, 12774
Rimington, C. R. . . . 6233
Riml, O. . . . 3898
Rinderknecht, H. . . . 10870, 16625
Rindone, G. . . . 11296
Ring, G. C. . . . 3669
Ringier, B. H. . . . 1924
8846, 7492, 12028
Ringoen, A. R. . . . 5674
Ringrose, A. T. . . . 3733
Ringrose, R. C. . . . 6023
Ringsted, A. . . . 16402
Rinkel, M. . . . 217
Rioch, D. McK. . . . 459
2223, 16684
Ripan-Tilici, R. . . . 12046
Ripley, D. . . . 6425
Ripley, H. S. . . . 9354
Rippel, A. . . . 6314
Rippel, C. . . . 12072
Ripperton, J. C. . . . 15490
Rischel, A. . . . 4135
Rischkov, V. L. . . . 12135
Risdon, D. L. . . . 17029
Riseman, J. E. . . . 16743
Riser, M. . . . 13151, 13543
Riser, R. . . . 3647
Risi, A. . . . 5782
7796, 10929, 11246
Risley, P. L. . . . 4391
Rist, N. . . . 11603
11604, 15158
Ristitch, V. . . . 8120
Ristorcelli, A. . . . 999
Ritcher, P. O. . . . 15897
Ritchie, A. . . . 155
Ritchie, W. S. . . . 2721, 10036
Riter, G. . . . 16032
Rittenberg, D. . . . 1940, 7417
7419, 7421, 7422
7423, 7425, 7426
Ritter, H. B. . . . 12643
Ritz, N. D. . . . 13178
Ritzman, E. G. . . . 4405
Ritzmann, J. . . . 9217
Rivard, D. . . . 9207
Rivaz, C. P. . . . 6479, 6482
Rivera-Hernández, G. . . . 13793
Rivers, T. M. . . . 2567, 11556
Rix, E. . . . 756
Roach, W. A. . . . 6622
Roark, R. C. . . . 1527, 5076
5077, 5078, 12238
Roath, W. . . . 15576
Robak, H. . . . 8405
Robb, G. P. . . . 14775
Robb, J. S. . . . 496
497, 12643
Robb, R. C. . . . 497, 12643
Robbers, H. . . . 11247
Robbins, B. H. . . . 7797
11248, 11249, 13178
Robbins, E. B. . . . 513
Robbins, W. J. . . . 6570
8574, 10316, 17702
Robbins, W. R. . . . 14440
Robb-Smith, A. H. T. . . . 603
Roberg, M. . . . 2741
Robert, A. L. . . . 6639
Robert, P. A. . . . 10685
Robertis, E. de . . . 2002
14584, 14585
Roberts, A. . . . 5197, 7023
Roberts, E. . . . 16224, 17435
Roberts, E. A. H. . . . 17406
Roberts, E. L. . . . 15286
Roberts, H. E. . . . 13375
Roberts, J. . . . 15543
Roberts, J. L. . . . 6519, 17435
Roberts, J. T. . . . 16744
Roberts, L. J. . . . 16824, 16825
Roberts, O. . . . 12118, 13995
Roberts, R. C. . . . 11970
Roberts, R. H. . . . 10172
Roberts, S. J. . . . 15256
Roberts, W. R. . . . 15286
Robertson, D. . . . 6728, 12148
Robertson, D. W. . . . 8940, 17743
Robertson, G. W. . . . 7529
Robertson, H. E. . . . 4220, 14575
Robertson, J. D. . . . 1981, 7377
Robertson, J. S. M. . . . 9159
Robertson, M. . . . 8172, 8173
Robertson, M. E. . . . 10440
Robertson, O. H. . . . 5821
Robertson, W. A. . . . 6534
Robertson, W. V. B. . . . 12643
Robeznieks, I. . . . 312, 5464
Robinow, C. F. . . . 8192
Robinow, M. . . . 12643, 13192
Robinson, A. . . . 10648
Robinson, A. L. . . . 7067
Robinson, C. H. . . . 17604
Robinson, C. L. . . . 8273
Robinson, E. M. . . . 11750
Robinson, E. S. . . . 8145
Robinson, F. A. . . . 7470
Robinson, F. B. . . . 8506
Robinson, F. H. . . . 15327
Robinson, F. W. . . . 11701
Robinson, G. G. . . . 18007
Robinson, G. M. Mrs. . . . 1404
Robinson, G. W. . . . 2877
Robinson, H. . . . 7738
7788, 14836
Robinson, H. B. G. . . . 14903
Robinson, H. D. . . . 7528
Robinson, H. E. . . . 3705
7464, 12643
Robinson, H. M. . . . 9074
Robinson, L. J. . . . 498
Robinson, M. . . . 12353
Robinson, R. . . . 1404
2134, 2758
Robinson, R. J. . . . 3525
Robinson, R. W. . . . 2268
11170, 11195
Robinson, W. . . . 10441
Robinson, W. O. . . . 1198
Robitzsch, J. . . . 6480, 11951
Robschiet-Robbins, F. S. . . . 7889
9267, 13264
Robson, G. B. . . . 4290
13173, 14614, 14615
Robson, J. M. . . . 5636
7602, 9290, 11069
Robson, W. D. . . . 5870
Roby, C. . . . 13178, 16808
Robyns, W. G. A. . . . 26
Rocche, G. . . . 1934
Rocha e Silva, M. . . . 5733
5815, 5816, 13472
Rochat, J. . . . 12664
Roche, A. . . . 13272
Roche, J. . . . 3707, 9380
12764, 12765, 12893
Rochhausen, M. . . . 17536
Rockwell, H. . . . 5163
Rodbard, S. . . . 11181, 12643
Roddie, L. H. . . . 27
Rodeck, H. G. . . . 1538
Rodeheffer, I. A. . . . 9080
Rodenkirchen, J. . . . 6291, 6292
Rodenwald, E. . . . 8303
Rodewald, L. . . . 14221
Rodewald, R. . . . 14222
Rodewald, W. . . . 4221
4222, 9319
Rodgers, E. O. . . . 16466
Rodhain, J. . . . 12264, 12265
Rodinó, D. . . . 13614
Rodrigo, P. A. . . . 4842, 4876
Rodriguez, P. . . . 12970
Rodriguez, R. . . . 14192
Roe, A. . . . 12473
Roe, J. H. . . . 7312, 11035
Roeder, K. D. . . . 9562, 16703
Roeder, S. . . . 16703
Roelcke, K. . . . 8363, 15328
Roelofs, J. W. . . . 17598
Roelsen, E. . . . 5607, 7725
Roemer, H. . . . 4832
Roemer, T. . . . 2954
Roepke, R. R. . . . 11036
Roessler, H. . . . 11173
Roessler, R. . . . 12414
Roets, G. C. S. . . . 6246
Roffo, A. E. . . . 4224, 13220
4224, 3710
9594, 9596
Roffo, A. H. . . . 3571
4223, 4224, 4225
4226, 9591, 9592
9593, 9594, 9595
13221, 13222, 13223
13224, 13225, 14491
Roger, D. M. . . . 8341
Roger, L. . . . 6194
Roger, H. . . . 6349
Rogers, C. H. . . . 172
Rogers, C. H. . . . 3388
4909, 10371
Rogers, D. P. . . . 15459
Rogers, E. C. . . . 1526
Rogers, G. A. . . . 16167
Rogers, K. B. . . . 8179
Rogers, L. . . . 8166
Rogers, L. A. . . . 2737
Rogers, L. H. . . . 6481
Rogers, R. P. . . . 17194
Rogers, T. H. . . . 8472
Rogers, W. M. . . . 7983, 12643
Rogers, W. S. . . . 1715
Rogoff, J. M. . . . 11196, 12643
Rohmeder, E. . . . 8543
10268, 13951, 17660
Rohmer, . . . 15880
Rojas, P. . . . 7739
2451, 7987, 7988

AUTHOR INDEX

Roland-Sanders

- Roland, G. 6657
14068, 15829
Roldan, E. F. 6638
Roley, W. C. 9256, 12643
Rolinier, R. 11906
Roll, H. 7212, 10804
Roll, R. M. 9622
Rolleder, A. 9749
Rollefsen, G. 1872
Roller, E. M. 10209
Roller, J. 13281
Rollins, R. C. 2878, 13760
Romagnesi, H. 2813, 11824
Roman, E. 8800
10507, 12266, 14186
Roman, W. 5507, 16329
Romano, S. 11328
Romanoff, A. 6093, 13282
Romanoff, A. L. 14437
Romanova, M. C. 3079
Romberg, L. D. 12073, 13987
Römcke, O. 2279
Rome, H. P. 17334
Romell, R. 7213
Romer, A. S. 18051
Romero, R. 9528
Romijn, C. 2116, 7378
Romine, D. S. 6501
Romma, H. J. 4843
Romney, V. E. 8645, 10415
Romose, F. 10788
Romshe, V. A. 13905
Roncallo, P. 13812
Roncati, C. 2415
Rondinini, B. 5915
Rondinini, R. 6555
Rondoni, P. 294
Roney, J. N. 15905
Ronzi, E. 5709
Rooks, R. 15329
Roome, N. W. 9529
Rooswal, M. L. 1694
Roos, C. J. 1982
Roos, J. 2116, 7378
Roosen-Runge, C. 12865
Roosen-Runge, E. C. 13326, 13327
Root, H. E. 14776
Root, R. W. 10930
Root, W. S. 12643
Ropes, M. W. 9158, 12643
Rosa, A. 17381
Rosa, B. 1687A
Rosanova, G. 1687A
Rosca, A. 10587
Rosca, V. 2773
Rosdahl, K. G. 5825, 7260
Rose, A. 1330
Rose, B. 2329, 12643
Rose, C. L. 12643
13178, 18552
Rose, D. C. 17107
Rose, D. H. 17848
Rose, E. 9613
Rose, E. J. 7884
9609, 9936, 11559
Rose, H. M. 17240
Rose, L. E. 17611
Rose, W. C. 7405, 16482
Rosebury, F. 7421
Rosebury, T. 15037
15330, 16464
Rosemann, H. U. 440
Rosen, C. 1918
Rosen, H. R. 3143
3158, 3169
Rosen, I. 11619
Rosen, M. 13435
Rosen, S. H. 12973, 12984
Rosen, W. 4812
Rosenbaum, F. F. 11183
Rosenberg, A. A. 16236
Rosenberg, A. 13094
Rosenberg, L. 448
Rosenberg, M. 5398
Rosenberg, S. J. 14726
Rosenbluth, A. 460, 4025
4027, 4028, 9501
9503, 12643, 14725
Rosenblum, H. 12909
Rosenblum, B. 4254
Rosenbohm, A. 4209, 4227
Rosenbusch, C. T. 6815, 8167, 13579
Rosen, W. Jr. 18079
Rosenfeld, A. H. 18832
Rosenfeld, H. 972, 11619
Rosenfeld, W. S. 381
Rosenfels, R. S. 12108, 12111
12108, 12111
Rosenheim, P. 11984
Rosenkranz, G. 12048
Rosenkranz, K. D. 9428
Rosenkranz, S. 546, 547
Rosenow, E. C. 4503
15207, 17195
Rosenthal, L. 14850
Rosenthal, N. 11386
Rosenthal, S. M. 6151, 15208
Rosenthal, S. R. 12643, 13473
12643, 13473
Rosenthaler, L. 8562
Rosenwald, A. S. 11751
Rosenzweig, S. 7088, 13509
Rosewall, O. W. 6912
Rosier, H. J. 10027
Rosinger, A. V. P. 3454
Rosinger, K. E. 3454
Roskam, J. 11329
Rosner, L. 7379
Rosner, S. 9597
Rosner, S. 5630
Ross, A. 17732
Ross, A. F. 15565
Ross, A. M. 15159
Ross, A. T. 7820
Ross, C. W. 16934
Ross, D. A. 10596
Ross, E. S. 3130
Ross, F. A. 16246
Ross, F. W. 257, 8254
Ross, Sister H. 13376
Ross, M. A. 11297, 11702
11297, 11702
Ross, R. 9697
Ross, R. W. 15209
Ross, T. E. 14487
Ross, T. F. 7274
7275, 8577
Rossett, N. E. 6094
Rossi, A. 9407, 16313, 16653
9407, 16313, 16653
Rossi, F. 4833
Rossi, F. 14851
Rossi, F. 14852, 16433
14852, 16433
Rossi, U. 11952
Rostand, J. 1383A
10677, 14322, 17044
Rostenberg, A. Jr. 4516, 18474
Rostorfer, T. H. 870
Rostorfer, T. H. 370, 7371
370, 7371
Roth, A. R. 5230
Roth, G. M. 11179, 12648
11179, 12648
Roth, H. 12267, 17241
12267, 17241
Roth, P. 5504
Rothbard, S. 14904
Rothberger, C. J. 7726
Rothmaler, W. 2865
Rothmaler, W. 1140
Rothney, J. W. M. 721, 9476
721, 9476
Rothschild, E. 9244
Rothschild, G. 5598
Rothschild, H. 4820
Rothschild, L. 5474
Rothschild, Lord, 11492
Rothmann, E. 17053
Rotta, A. 16471
Rotter, H. 337, 12198
Rottano, A. 11299, 14777
11299, 14777
Rottschäfer, G. 7331
Rouchdi, M. 13475
Roughley, T. C. 12631
Roughton, F. J. W. 7880
Rounsefell, G. A. 1873
Rous, P. 538, 6163
Rouschal, E. 10739, 15746
10739, 15746
Rousseau, J. 4800
Roussel, G. 9143, 16844
9143, 16844
Rousselot, L. M. 9614
Roussy, G. 13226
Routh, J. L. 295, 16330
Routil, R. 5937
5988, 13525
Rouvière, H. 11380
Roux, E. 11380
Roux, G. 1886
Roux, H. 18062
Rouyer, M. 12697
Rovenstine, E. A. 9531
Rovner, L. 12643
Row, R. 6195
Rowan, P. A. 3048, 4906
Rowe, A. H. 11557, 15160
11557, 15160
Rowinski, P. 9196
Rowland, H. 15555
Rowland, S. J. 4411, 4684
4411, 4684
Rowlands, E. N. 4261
Rowlands, I. W. 9361
Rowlands, J. W. 14644
Rowntree, L. 11985
Rowntree, L. G. 389
391, 9295
Roy, B. 8507
Roy, D. N. 3201
12225, 12226, 18008
Roy, G. K. 5567
Roy, M. 10887
Roy, N. C. 5535
Roy, W. R. 15789
Royle, H. 16637
Royle, N. D. 14778
Royster, C. L. 15216
Roze, E. 3028
Rozeboom, L. E. 12374
Rozenaal, H. M. 245
Roizin, S. 7902
Rübel, E. 7214, 7215
Ruben, S. 8695
Rubens-Duval, A. 14515
Rubin, J. M. 5480
Rubin, M. A. 461
5693, 7915, 12643
Rubin, S. H. 1935, 12643
1935, 12643
Rubino, S. S. 2416
Rubinstein, H. S. 3899
7547, 9362, 14971
Ruch, L. L. 16396
Ruchhoff, C. 8304, 15331
8304, 15331
Ruchkin, V. N. 10198
Rud, E. V. 4093
Rudd, G. E. 823, 8243
823, 8243
Ruddy, Sister M. V. 2018
Rudnick, D. 757
Rudolf, G. de M. 4291
Rudolph, B. A. 10349
Rudolph, W. 10001
Rudomanski, V. 4176
Rudorff, W. 5371
Rudy, W. J. 7401, 17108
7401, 17108
Rüe, E. A. de la, 12240
Rue, J. L. 3169
Ruebush, T. K. 5300
6799, 12300
Ruedemann, R. 166, 6771
166, 6771
Rüegger, A. 2056
Ruesegger, J. M. 6152
Ruehe, H. A. 1041
Ruehle, G. D. 12155
Ruff, G. 4483
8137, 17179, 17180
Ruffin, J. M. 4282
12910, 13273, 14950
Ruffo, A. 7276
Ruge, U. 13997
Ruggiero, W. F. 18504, 15267
18504, 15267
Rugh, R. 3900, 4313
Rühl, A. 7798
9184, 9530
Ruhland, W. 1394
Ruhne, G. N. 6482
Ruigh, W. L. 10931
Rukstnat, G. J. 15089
Ruland, H. 3859
Rule, A. M. 2659
4567, 4568, 9927
Ruman, S. 5289
Rumbach, R. 4787
Ramold, M. J. 357
Rumsey, J. M. 14968
Rung, H. 9568
Rungs, O. 6917
Runkle, R. C. 8874
Runnels, H. A. 3161
Runnstrom, J. 4924
Runyon, H. E. 17537
Rupel, I. W. 17068
Rupp, H. M. R. 2838, 6392
2838, 6392
Rüppell, W. 16091
Rusch, H. P. 570, 12643
14874, 14905, 16835
Rutsche, E. 9046
Rushton, M. A. 9704
Rusk, H. P. 9801
Rusk, H. W. 12176
Rusk, R. D. 14323
Ruskin, S. L. 2078
Rusoff, L. L. 8068
11753, 17109
Russ, E. 3694
Russ, S. 16324
Russell, J. C. 17575
Russell, W. C. 786
Russell, A. J. H. 15332
Russell, E. S. 3523, 8957
3523, 8957
Russell, F. S. 3278
10813, 15984, 16273
Russell, J. A. 3689
3901, 12985
Russell, M. B. 10758
Russell, M. K. 12791
Russell, N. G. Jr. 4083
Russell, P. 1141
Russell, P. F. 10438
10442, 10508
12268, 15970
Russell, R. C. 10109, 17820
Russell, R. S. 8584
Russell, W. 2839
Russell, W. C. 15106, 16543
15106, 16543
Russell, W. L. 14970
Russell, W. R. 16973
Russell, W. T. 10008
Russell-Wells, B. 6606
Russo, C. 2568, 6095
Russo, G. 10932, 13709
Rust, W. 2368
Rutchenkin, V. N. 13833
Ruth, W. A. 5877
14545, 14546, 14550
Ruther, H. 9778
Rutheke, P. 8843, 16092
Ruttink, J. 9564
Ruttle, M. L. 8941
Ruttner, F. 1854
Rutzler, J. E. Jr. 15776
Ruud, J. T. 1874
Ruys, A. C. 6196
Růžicka, J. 1302
4897, 10269
Ruzicka, L. 3902, 3903
3904, 3905, 3906
3907, 5551, 9363
9364, 9365, 12047
12048, 12049, 16629
Ryall, A. L. 6678
Ryan, H. J. 10377
Rydin, A. 3757, 3758
Rydon, H. N. 1339
Rygh, O. 5574
Ryle, G. B. 4898
Ryo, F. 17469
Rytz, F. 10002, 17343
S
Saad, K. 5784
Saalas, U. 12201
Sabalitschka, T. 11037, 11769
11037, 11769
Sabin, A. B. 7490, 12269
7490, 12269
Sabin, F. R. 900, 901, 902
912, 2569, 18476
Sabo, C. 2054
Sabri, I. A. 2348
Sabrosky, C. W. 14316
Saccardi, L. 12011
Saccchi, P. 13477
Saceghem, R. 944
Sachs, A. 426, 7726
Sachs, L. 11226
Sack, G. 1567
Sackett, R. S. 16674
Sacks, D. R. 13629
Sacks, J. 7694
11153, 12643
Sackville, J. P. 2497
Sacleux, P. 1142
Sadasiyan, V. 17621
Sadovnikov, M. M. 11397
Saenz, A. 6247, 9978
Safford, V. 10909, 12643
10909, 12643
Safranski, L. 7231
Sagara, S. 16309
Sager, O. 11856
Sager, O. P. 7690
Saggese, V. 4638
Saglik, S. 695
Sah, P. T. 8592
Saha, K. O. 10956
Sahai, L. 3252, 11752
Sahler, O. de P. 16325
Sahlgren, E. 4211
Sahyun, M. 3648
7799, 10871
Saier, E. 9120
Saifer, A. 16368
Sain, M. F. 14385
Sailer, S. 11605
St. Amant, L. 6827
St. George, A. V. 17259
St. John, H. 1158
11896, 11897
St. Pflau, A. 3049
8563, 10295, 12050
St. Pierre, J. M. 9807
St. Varadi, 5837
Sair, L. 1031
Saito, E. 8381
Saito, G. 16093, 16094
Saito, K. 8678
Saito, Y. 12986
Saka, O. 691
Sakaguchi, K. 17407
Sakaguti, H. 3561, 3562
Sakai, K. 17196
Sakai, T. 1616
Sakaki, K. 8146
Sakano, N. 16569
Sakurai, R. 9257
Sakurai, T. 4331
Sala, G. 8897
Saladino, E. 810
Salaman, R. N. 1441
3131, 13834
Salamon, E. 10076
Saland, G. 11197
Salaries, P. 15861
Salaris, C. 548
Saldana, C. T. 1295
Salgues, R. 1340
10938, 18080
Salis, A. 7800
Salis, M. 12489
Salisbury, G. W. 17890
Salisbury, L. F. 14440, 17910
14440, 17910
Salit, P. W. 9481
Salk, M. R. 11091
Salkin, D. 11364
Sallans, H. R. 1199, 6453
Salle, A. J. 11558
11703, 15422
Salman, K. A. 1509
Salmon, H. M. 5247
Salmon, J. 44
Salmon, S. O. 1200
Salmon, T. N. 3908
Salmon, U. 3909
Salmon, U. J. 2125
3824, 9366
12953, 12987
Salmon, W. D. 11843, 17731
11843, 17731
Salomon, H. 1924
3846, 7492, 9244
Salon, D. D. 16942
Salsbury, C. R. 709
Salter, W. T. 399, 14899
Salvador, J. 13952
Salvesen, H. A. 2148
2149, 4094
Samaan, A. 16649
Samaan, K. 5784
Sammartino, R. 7574
14674, 14686
Sammis, F. E. 6028
Sampson, A. W. 13809, 16264
13809, 16264
Sampson, F. R. 13047
Sampson, H. L. 16908
Sampson, W. L. 7801
Sampson, W. W. 8786
Samson, P. O. 13245
Samuel, C. K. 17788
Samuel, P. 1201
Samuels, B. 2384
Samuels, C. D. 15617
Samuels, L. T. 13178, 14520
13178, 14520
Sanborn, C. C. 12455
Sanborn, J. R. 13652
Sanchez, S. T. 2913
Sandals, K. M. 3508
Sandberg, M. 9367
10846, 12847
Sander, F. 8186, 9903
11370, 15333, 15334
Sander, M. 9903, 15334
Sanders, D. A. 6248, 11753
6248, 11753
Sanders, H. G. 4409
15540, 15541
Sanders, J. 14377
Sanders, T. E. 7858

- Sanderson, E. S., 4504, 17209
 Sanderson, M. W., 17875
 Sandground, J. H., 17911
 Sandholm, A., 2713
 Sandholzer, L. A., 6325, 15263
 Sandin, M., 10957
 Sando, W. J., 15566, 16186
 Sandor, G., 18423, 18478
 Sandow, A., 5282
 Sandrasagra, A. P., 5965
 Sandstedt, H., 2694
 Sandweiss, D. J., 11030
 Sanford, A. H., 17357
 Sanford, G. B., 12149, 17821
 Sanford, T. D., 16540
 Sanford, W. G., 10534
 Sang, J. H., 6598
 Sangar, E. B., 5510
 Sankaran, G., 3649, 4320
 Sanmann, F. P., 15110
 San Martin, J., 15257
 Sansome, E. R., 5328
 Sansome, F. W., 10730
 Sansum, W. D., 269
 Santa, N., 16530
 Santavy, F., 9146, 10958
 Santee, R., 5198
 Santenaise, D., 5608, 12927
 Santos, F. O., 16423
 Santos, J. K., 7104
 Santyan, V. Velasco, S., 17197
 Sapiro, J. J., 15335
 Saphir, O., 9958
 Saphir, W., 9368, 11667
 Sapiro, B. A., 4254
 Sapozhnikova, K. V., 15777
 Sapper, K., 1665
 Sapper, W., 15694
 Sappington, T. S., 399
 Saraiva, A. C., 14262, 14263
 Saram, G. S. W. de, 3745, 5586
 Saran, A. B., 8581
 Sarata, U., 12827
 Sarazin, J., 12828, 12829
 Sarbadhikari, P. C., 10071
 Sarciron, R., 6375
 Sargent, F., 9888, 10756
 Sargent, G. B., 17678
 Sargent, Mrs. M. C., 5207
 Sarin, J. L., 11953
 Sarkady, L., 358
 Sarkisov, S. A., 4029
 Sarles, M. P., 11572
 Sarles, W. B., 15535
 Sarnowicz, W., 8235
 Sarre, H., 13026
 Sartori, E., 16630
 Sas, L., 1983, 12810
 Saslow, G., 258, 7255
 Sassaman, H. L., 2054
 Sata, Y., 13433
 Satō, I., 7659
 10588, 14242, 14243
 Satō, M. M., 1091
 Sato, N., 7533
 Sato, R., 7241
 Sato, W., 3505
 Satorius, M. J., 2498
 Satta, A., 11250
 Satta, E., 8305
 Satterfield, G. H., 330
 5569, 11510, 15739
 Sattler, L., 16386
 Sauberer, F., 140
 1854, 10760
 Sauer, E., 6009
 Sauer, F., 5999, 8088
 Sauer, H. F. G., 12192
 12231, 12399
 Sauer, M. E., 11398
 Saugstad, S., 3365, 14275
 Saul, L. F., 7088
 Saum, A. M., 3127
 Saum, A. S., 7369
 Saunders, F., 4714
 Saunders, F. J., 3910
 Saunders, G. M., 17314
 Saunders, H. C., 17344
 Saunie, 18667
 Saurino, V., 11613
 Saurow, E., 1387
 Saussenthaler, H., 15675
 Sautet, J., 15924
 Savage, D. A., 6483
 Savage, R. M., 1000
 Savagnone, L., 15245
 Savely, H. E., 10773
 Sæve-Söderberg, G., 3235
 Savile, D. B. O., 10355, 17494
 Savitzky, M. S., 13835
 Savory, T., 1662
 Savory, T. H., 17987
 Savur, S. R., 5361
 Savy, P., 16935
 Sawin, P. B., 5280
 11568, 15170
 Sawitz, W., 8708
 15971, 16904, 17895
 Sawkins, D. T., 7173
 Sawyer, C. E., 17387
 Sawyer, S. D., 14537
 Sawyer, W. A., 12823
 Saxen, U., 17515
 Saxton, J. A. Jr., 4394, 9369
 Sayeedud-Din, M., 1159
 Sayer, W., 15105
 Sayers, R. R., 11371
 Sayles, E. D., 13048
 Saylor, L. W., 5222, 6884
 Sayre, G., 1094
 Sburian, D. A., 15516
 Scales, A. L., 5040
 Scaloni, W. N., 7024
 7025, 8844
 16095, 16096
 Scammell, H. L., 11678
 Scamoni, A., 8573
 Scamtonbury, R. E., 12643
 Scaramella, P. P., 13787
 Scarpellino, L. A., 4514, 13492
 Scarth, G. W., 3432, 6609
 Scartozzi, C., 2570, 2571, 2572
 2573, 6096, 8236
 Scatchard, G., 5435
 Schaal, L. A., 1739, 15879
 Schaare, U., 16654
 Schach, H., 4718
 Schachter, B., 2126
 Schachter, R. J., 390, 9370
 Schad, C., 1756
 Schade, H., 1799
 Schade, 2652
 Schade, R., 12596
 Schaefer, C. W., 3349
 Schaefer, G., 16868
 Schaefer, H., 4052
 12702, 16719
 Schaefer, K., 9395
 Schaefer, M. B., 5407
 Schaefer, W., 13479
 Schaeffer, J., 8398
 Schaeffer, L., 15676
 Schaefferberg, B., 12354
 Schaeuble, J., 9750, 9751
 Schäfer, E., 8845
 Schäfer, K., 825, 6138
 Schäfer, K. E., 11152, 12794
 Schäfer, W., 7794
 15264, 17198
 Schaffer, J. M., 3253, 17279
 Schaffer, K., 7957
 Schaffer, N. K., 389, 391
 Schaffner, J. H., 1107
 1672, 8902
 Schaffstein, G., 6571
 Schafft, W., 13227
 Schaible, P. J., 6024
 Schairer, E., 13205
 Schales, O., 4149
 12711, 12766
 Schallack, G., 2432
 Schalm, L., 5661
 Schaltenbrand, G., 11306
 Schalter, H., 15279
 Schantz, V. S., 7038
 Schapiro, E., 11251
 Schär, B., 12683
 Schaeffter, R., 3513
 Scharrer, B., 1780
 Scharrer, B. C. J., 4400
 Scharrer, E., 4323
 Schartner, R., 8147
 Schattenberg, H. J., 14917, 16584
 Schaub, I. G., 6097
 Schauder, W., 28
 Schaumann, O., 4150
 Schechtman, A. M., 753, 13334, 13336
 Schedl, K. E., 1510, 6885
 Scheep, F. L., 16434
 Scheer, J. van der, 11543
 Scheff, L., 2109
 Scheffer, T. H., 114
 Scheffer, V. B., 3525
 Scheff-Pfeiffer, I., 3864, 4138, 5531
 Scheibe, A., 5329
 Scheibe, H., 8168
 Scheideler, J., 9467
 Scheidt, W., 5356
 Scheie, H. G., 17312
 Scheiner, H., 14665
 Schelhorn, M. v., 13819
 Schellenberg, A., 6349
 Scheminzky, F., 2228
 2241, 16696, 16704
 Schenck, H. P., 15147
 Schenken, J. R., 3763, 7536
 Schenker, V., 2127
 12643, 16964
 Schepers, G. W. H., 2462, 9752, 16958
 Scheps, M., 7479
 Scherbakov, A. P., 8585
 Scherechewski, N., 4292
 Scherer, H. J., 604, 15017
 Scherer, L. E. Jr., 16097
 Scherler, A. W., 11497
 Schermerhorn, L. G., 15614
 Scherp, H. W., 804, 4507
 Scherston, B., 7327
 Schertz, F. M., 3092
 Schettler, O. H., 5876
 Scheunert, A., 7469
 Schick, B., 17199
 Schieblisch, J., 6484
 Schiel, O., 6249
 Schieman, O., 15321
 Schievers, J., 5768
 Schiff, A., 57
 Schiff, E., 2349
 Schifferli, A., 8846
 Schiffman, M. K., 11668
 Schiffman, A., 10858
 Schiffin, M. J., 12643
 Schijvershuurder, W., 11631, 13644
 Schild, H. O., 9887
 Schill, E., 9654
 Schiller, J., 8379
 Schilling, L., 16203
 Schilling, W., 597
 Schimert, J., 9689
 Schimitschek, E., 15677
 Schindler, H., 1092, 8414
 Schindler, O., 9672, 12426
 Schindler, R., 7882
 Schinz, J., 8847
 Schjød, E., 647
 1984, 7883
 Schipkus, E., 14849
 Schlanbusch, P., 6197
 Schlegel, H., 16810
 Schlehuber, A. M., 12150
 Schleicher, E. M., 7886, 9137
 Schleip, H., 6673
 Schlemmer, J., 14315
 Schlenk, F., 13266
 Schlenker, G., 3064
 Schlenker, H., 5798
 Schlesch, H., 10567
 Schlienz, G., 7325
 Schliephake, E., 9105, 12702
 Schlittler, E., 12027
 Schloemer, C. L., 8818, 14419
 Schlossberg, H., 2177
 Schlossberg, M., 17876
 Schlossberger, H., 6556
 Schlösser, L. A., 6520
 Schlotthauer, C. F., 15384
 Schlöchterer, E., 17276
 Schlutz, F. W., 2037
 Schlyvitsch, B., 11399
 Schmah, M., 13228
 Schmale, F., 10150
 Schmatolla, G., 16355
 Schmeisser, H. C., 5726
 Schmeltz, E., 8556
 Schmid, E., 894, 903, 913
 2574, 4505, 5386
 Schmid, H., 11488
 Schmid, R., 11252
 Schmidt, A., 7019
 Schmidt, B., 11704, 17345
 Schmidt, C. F., 4063
 Schmidt, C. L. A., 3967
 12811, 14568
 Schmidt, C. R., 3682
 7501, 9268
 Schmidt, E. C. H. Jr., 3916
 Schmidt, G., 1896, 14448
 Schmidt, H., 9232
 11476, 11477
 Schmidt, H. L. Jr., 11348
 Schmidt, H. W., 4228
 Schmidt, I. G., 392
 393, 5644
 Schmidt, J., 9468
 Schmidt, K. F., 3405
 Schmidt, L. H., 193, 4564, 7802
 9935, 11606, 17275
 Schmidt, M. B., 6570
 8574, 10316
 Schmidt, O., 5479
 Schmidt, O. C., 6331
 Schmidt, P. J., 16282
 Schmidt, R., 15567
 Schmidt, S., 904
 Schmidt, W., 11414
 13229, 16232
 Schmidt, W. J., 13058
 Schmidt-Lange, W., 2774, 5797
 Schmidt-Thomé, P., 15941
 Schmieder, R. G., 12388
 Schmitt, F. O., 8597
 12643, 16293
 Schmitt, L., 4844
 Schmitt, W. L., 8729
 Schmitz, A., 5465
 Schmitz, A. M., 13377
 Schmitz, H., 5003
 18941, 17650
 Schmitz, H. B., 2575
 Schmole, J. F., 8508
 Schmoll, H. M., 17516
 Schnarf, K., 3029
 Schnedorf, J. G., 7666, 12543
 Schneider, C. L., 13989
 Schneider, E., 7965
 Schneider, E. C., 1884
 Schneider, F., 8977
 Schneider, H., 9240
 Schneider, H. A., 16526
 Schneider, J. J., 14807
 Schneider, L., 915, 6098, 6125
 9905, 9906, 9907
 Schneider, M., 2231
 2232, 2234, 2235
 Schneider, O., 8005
 Schneider, R., 4293
 Schneider, S., 9026
 Schneider, W., 7976
 Schneider-Orelli, O., 1511
 Schneierson, S. S., 13480
 Schnell, M. R., 1112
 Schnell, R., 3030, 3198
 Schnelle, F., 10761
 Schnitler, K., 603
 Schnoor, T. G., 8252
 Schnur, S., 13115, 16745
 Schöberl, A., 12673
 Schocke, H., 11291, 13211
 Schocken, K., 1370
 Schoedel, W., 3772
 Schoeffel, E. W., 13178
 Schoen, R., 17286
 Schoenaers, F., 13602
 Schoenborn, H. W., 7184, 10525
 Schoene, H., 4151
 Schoenheimer, R., 1940, 7417, 7419
 7421, 7422, 7423
 7424, 7425, 7426
 Schoening, H. W., 13580
 Schoental, R., 215, 216
 Schoepfle, G., 10839
 Schoffman, R. J., 5408
 Schofield, F. W., 11781
 Scholl, F. M., 6543
 Schölmacher, P., 4052
 Scholz, C., 5641, 9348
 Scholz, J., 14492
 Schomer, H. A., 14035
 Schönfeld, R., 1303
 Schönheyder, F., 15695
 Schönmann, W., 10738, 11453
 Schoonmaker, W. J., 166
 5219, 5240
 Schoonover, W. R., 13906
 Schoop, G., 8274
 Schoorl, P., 2003
 Schopf, J. M., 10098
 Schopfer, W. H., 6572, 6591
 Schorger, A. W., 5222
 Schormüller, J., 7483, 12848
 Schorr, L., 11348
 Schott, H. A., 15568
 Schott, R. G., 3467
 Schotté, O. E., 4392
 Schotterer, A., 11483
 Shour, I., 2446
 3719, 4307, 7982
 Schousboe, J., 16369
 Schouten, J. F., 9469
 Schrader, A. H., 1304
 Schrader, A. L., 15615
 Schrader, G. A., 11343
 Schramm, J. R., 3437
 Schramm, W., 5675, 8070
 Schreffler, C. B., 3721
 Schreiber, B. O., 17538, 17542
 Schreuder, E. J., 13953
 Schreus, H. T., 11669
 Schreven, D. A. v., 14076
 Schribsaux, E., 2955
 Schriker, J. A., 17737
 Schriek, W., 2539, 8275
 Schriever, H., 2242
 Schriff, M. H., 15267
 Schröcksnadel, H., 5781
 Schröder, J., 6451
 Schröder, W., 7822, 16714
 Schroeder, A. R., 14497
 Schroeder, C. R., 2601
 Schroeder, E. F., 16370
 Schroeder, E. M., 6586
 Schroeder, F. R., 14100
 Schroeder, H. A., 12740
 Schroeder, Sister M. P., 1403
 Schroeder, R. A., 12623
 Schroeder, W. C., 5157, 12620
 Schroeter, C., 10685
 Schu, Y., 5822
 Schube, P. G., 5838
 Schubert, G., 9470
 Schubert, O., 12318
 Schuchard, W., 2066
 Schuchert, C., 5165, 12310
 Schuck, C., 4152
 Schuffner, W., 923
 8207, 8208
 Schugt, P., 11670
 Schuijl, J. W., 5564
 Schulemann, W., 14918, 15210
 Schüller, H., 4383
 Schulman, C. A., 1696
 Schulman, J. H., 5436
 Schulte, T. L., 11253
 Schultes, R. E., 2840
 12475, 13971
 Schultheis, H. E., 6119
 Schultz, A. H., 2459, 3976
 Schultz, A. S., 5565, 16333
 Schultz, E. F., 4877
 6321, 17599, 17659
 Schultz, E. S., 3169, 10362
 Schultz, F. W., 9933
 Schultz, F. W., 9233
 Schultz, H., 8061
 Schultz, H. W., 2750, 6298
 Schultz, L. P., 3889
 5158, 5159, 5248

AUTHOR INDEX

Schultz-Shrimpton

Schultz, M. P. 7884, 7885
 8276, 9809, 9655
 9936, 11559, 15265
 Schultz, O. T. 2781
 Schultz, R. L. 14209
 Schultz, W. 236
 Schultze, M. O. 14460
 Schultzer, P.
 12864, 16371
 Schulz, E. 10530, 13123
 Schulz, H. 8148, 10443
 Schulz, M. 4700
 Schulz, M. D. 12643
 Schulze, 3568
 Schulze, E. 7967
 9223, 14951
 Schulze, F. E. 5
 Schulze, G. M.
 10151, 10229
 Schulze, P. 6356
 10581, 12333
 Schulze, T. 3516
 Schulze-Menz, G. K.
 2828
 Schulz-Uttenhöhl, H.
 11705
 Schumacher, A. E.
 17110
 Schumacher, W. 15817
 Schumann, H. 11156
 Schumm, O. 7318
 Schussnig, B. 6332
 Schuster, H. F. 5375
 Schuster-Woldan, E.
 9565
 Schütz, E. 491
 Schütz, G. 10719
 Schuurmans Stekhoven,
 J. H. Jr. 15999
 Schuyten, M. C.
 1143, 1376
 Schwab, E. 4506
 Schwab, R. S.
 2317, 16934
 Schwabe, E. L. 7543
 Schwabe, G. H. 7232
 Schwantke, J. 12716
 Schwartz, H. H. 12227
 Schwartz, L. H.
 12777, 11724
 Schwartz, B. M. 12654
 Schwartz, E. D. 7928
 Schwartz, H. G. 2330
 Schwartz, L.
 13547, 15995
 Schwartz, R. 2746
 Schwartz, S. O. 633
 Schwartz, V. 86
 Schwartz, W. 15405
 Schwartz, W. E. 7803
 Schwartz, C. D.
 6687, 15860
 Schwarz, E. 5240
 10739, 12456
 Schwarz, H. 797
 12012, 13954
 Schwarz, H. E. 3723
 Schwarz, H. F.
 6928, 12389
 Schwarz, M. 8848
 Schwarz, O. 2827
 2879, 4788, 15485
 Schwarz, W. 12584
 Schwarzmaier, E. 4606
 Schweiger, L. B. 11517
 Schweitzer, A. 16644
 Schweitzer, C. E. 16687
 Schwemmler, J. 16187
 Schwengler, K. 10290
 Schwarzdünger, F.
 14195, 15906
 Schwetz, J. 8709
 Schwickerath, M. 3031
 Schwidewsky, L. 5939
 5940, 5941, 8029
 Schwier, H. 5347
 Schwind, R. 4863
 Schiounoff, F.
 12849, 12850
 Scimone, L. 7916
 Scipades, E. Jr. 2369
 Scott, A. V. 12791
 Scott, B. 4902
 Scott, D. A. 359
 Scott, D. H. 13920
 Scott, E. O. G. 18048
 Scott, E. W. 7923, 9669
 Scott, G. H. 5920
 7695, 10875, 10876
 Scott, G. M. 16924
 Scott, G. W.
 1251, 17812
 Scott, H. M. 412, 5945
 Scott, J. C. 12643
 Scott, J. D. 9030

Scott, J. W. 167
 Scott, K. G. 9171
 11332, 16331
 Scott, L. B. 14121
 Scott, L. E. 15607
 Scott, M. H. 1688, 3032
 Scott, R. W. 13230
 Scott, T. F. McN. 15246
 Scott, T. G.
 10824, 14312
 Scott, V. B. 12643
 Scott, W. B. 5249
 Scott, W. E. 18105
 Scott, W. J. 1985
 Scott, W. 10909, 12643
 Scott, W. M. 8237
 Scott, W. S. Jr. 16737
 Scott, W. W. 15263
 Scott Blair, G. W.
 13378
 Scotti, G. 8149, 13615
 Scott-Moncrieff, R.
 12519
 Scoular, F. L. 310
 7458, 9176
 Scourfield, D. J. 17971
 Scribner, E. J. 4595
 9949, 13566
 Scripture, P. N. 17618
 Scruggs, W. M. 16988
 Scudder, J. 10934
 Scudder, S. A. 4508
 Scull, J. V. 8184
 Scull, C. W. 10935
 Scullien, H. A. 6929
 Scully, S. 6099, 8150
 Seaurt, F. 1202
 Seabra, A. F. de
 14259, 16026
 Seager, L. D.
 2090, 7500, 11038
 11254, 13137, 13178
 Seal, S. C. 1058, 6316
 Sealy, J. R. 10152
 Searight, W. V. 3508
 Searle, D. S. 5780
 Searle, E. M. 12202
 Sears, E. R.
 7134, 12509
 Sears, H. J. 17353
 Sears, P. B. 12565
 Seashore, H. G. 7696
 Seaton, H. L. 1264
 Seaton, L. 3354, 10454
 Seaver, F. J. 15460
 Sebastiani, A. 5727
 Seber, L. 7474
 Sebrell, W. H. 4263
 14946, 16512
 Secker, K. 4264
 Seckel, H. P. G.
 5599, 5600
 Secker, J. 394, 9371
 Secor, W. 1223
 Secrest, P. G. Jr. 15156
 Secrist, M. H. 8236
 Sedallian, P. 2576
 6100, 8151, 14841
 Seddon, H. R. 6250
 Sederholm, E. T. 1265
 Sedlacek, K. 15084
 Sedwick, H. J. 5585
 Seech, S. G. 3550
 Seegers, W. H. 7333
 12759, 12770
 Seelmann, 6126
 Seelmann, M. 2602
 Seeler, E. V. Jr. 12126
 Seelich, F. 16306
 Seelig, M. G. 606
 Seelye, J. M. 7742
 Seever, M. H. 2331
 2423, 7244, 13178
 Seefick, H. J. 13877
 Segal, G. 5475, 14579
 Segal, H. L. 549
 Segal, J. 13033
 Segal, M. S. 975
 Segaloff, A. 3845, 12643
 Segelitz, G. 3005
 Segerdahl, E. 4252
 Segers, M. 14779
 Segerstråle, S. G.
 1855, 10573
 Segura, A. S. 7727
 Seguro, M. 10936
 Seguy, E. 3335
 Sehra, K. B. 188
 Seib, G. A. 8010
 Seiberlich, J. 5431
 Seibert, M. V. 13241
 Seibert, R. J. 6429
 Seideman, R. M. 15161
 Seidenfaden, G. 3519
 Seif el Nasr, A. el G.
 1467

Seiferle, E. J. 12237
 Seifert, G. 8209
 Seifritz, O. 6171
 Seifritz, W. 178, 179
 Seiffer, J. 13178, 13179
 Seiser, A. 626
 Seitz, A. 15031
 Seitz, W. 3579, 16331
 Seki, M. 9711, 9712
 Sekiya, S. 17200, 17382
 Sekyria, L. W. 8538
 Selaries, 15880
 Selbie, F. R. 7842
 Selby, C. D. 8306
 Selko, L. F. 10824
 Sellards, A. W.
 1018, 13558
 Selle, R. M. 7038
 Sellei, C. 13231
 Sellek Azzil, A. 10003
 Sellers, A. H. 11706
 Sellers, A. W. 12210A
 Selman, I. W. 8586
 Selsam, M. E. 12060
 Selye, H. 360
 2127, 2332, 3808
 3911, 3912, 4324
 5813, 7381, 7522
 12643, 12751, 14644
 16424, 16665, 16964
 Semans, J. H. 5967
 Semb, J. 3713
 Semenov, H. 5823
 Semmens, C. S. 3447
 Sempio, C. 4994, 4995
 5004, 5005, 5006
 5007, 5014, 17822
 Sen, B. B. 2626
 Sen, K. C. 2499
 Sen, F. 1625
 1626, 6705, 11464
 Sendju, Y. 9161
 Sendroy, J. Jr.
 2150, 2593
 Senekji, H. A. 17912
 Senekjian, H. 15135
 Sengbusch, R. v. 8942
 Senges, H. 905
 Sen Gupta, P. C. 887
 Sen Gupta, S. C.
 10668, 15972
 Senn, H. A. 3460
 Sennings, W. C. 14417
 Senyürek, M. S. 11489
 Seppälä, J. 11150
 Seppilli, A. 6317
 Serby, A. M. 7882
 Serebrowsky, A. S.
 16204
 Serfontein, P. J. 17111
 Sergeant, G. 12228
 Sergeyeva, M. A. 16685
 Serini, A. 3844
 Sermolli, R. P. 12597
 Serota, H. 450
 Serota, H. M. 2243
 Serrano, L. L. 6485
 Serre, M. de la. 15673
 Serventy, D. L. 5184
 5199, 5200
 5201, 10649
 Service, W. C. 15386
 Seshan, B. A. 2499
 Seth-Smith, D. 16098
 Seton, E. T. 7071
 Setterstrom, C. 6616
 6617, 11262
 Settlege, P. 7618
 Settlege, P. H. 7667
 Setz, P. 1938
 Severac, M. 543, 9934
 Severin, H. H. P.
 3132, 17778, 17790
 Severinghaus, A. E.
 8913, 9372
 11418, 15024
 Sevringhaus, E. L.
 381, 5633, 5634
 12643, 12988, 16618
 Sewall, K. W. 11440
 Sexton, E. W. 12334
 Seybold, A. 12036
 12102, 12911
 Seymour, W. B.
 643, 2110
 Sgonina, K. 11121
 Shaby, J. A. 15961
 Shackleton, L. R. B.
 6823
 Shackman, R. 16631
 Shadle, A. R.
 12338, 18106
 Shadwick, G. W. Jr.
 13684
 Shaffer, M. F. 14495

Shafik-Abd-El-Malek,
 710
 Shahan, M. S. 13580
 Shakhlevich, M. V.
 10720
 Shaklee, A. O. 11157
 Shako, T. 13627
 Shamboorov, D. A.
 4509
 Shands, R. G. 6674
 Shands, W. A. 5038
 Shannon, J. A. 12643
 Shannon, R. C.
 8661, 13581
 Shanor, L.
 15433, 15461
 Shapiro, B. G. 3951
 Shapiro, B. M. 2577
 Shapiro, E. 9657
 Shapiro, H. 12643
 Shapiro, H. H.
 4357, 7983
 Shapiro, M. J. 11198
 Shapiro, S. 6969
 Shapley, H. 7069
 Shapott, V. S. 7382
 Sharif, M. 11707
 Sharp, A. J. 15479
 Sharp, C. A. Z. 15337
 Sharp, C. H. 6783
 Sharp, E. A. 7886, 9656
 Sharp, J. G.
 9128, 16483
 Sharp, P. F. 1026
 1027, 6010, 15793
 Sharp, S. S.
 6944, 14148
 Sharp, W. B. 15338
 Sharp, W. L. 2189
 Sharpey-Schafer, E. P.
 16631
 Sharpless, G. R.
 2030, 10959
 Sharsmith, C. W. 4789
 Sharsmith, H. K.
 2880, 17539
 Shattock, P. M. F. 4673
 Shattuck, G. C.
 2004, 14952
 Shaw, A. M. 6000
 Shaw, C. 8121, 10029
 Shaw, D. E. 2558
 Shaw, E. 2578, 17287
 Shaw, E. B. 11590
 Shaw, H. 10470
 Shaw, J. E. 10737
 Shaw, J. K. 13907
 13908, 13911
 Shaw, J. L. D. 218
 Shaw, K. J. 1456, 3169
 Shaw, L. 3142
 Shaw, O. A. 1013
 Shay, H. 5588, 12904
 Shecherbakov, A. P.
 6623
 Sheolnek, M. 11051
 Shealy, A. L. 777
 Shear, C. L. 13736
 Sheard, C. 12643
 Sheard, K. 3307
 Shearin, A. E. 1219
 Shechmeister, I. L.
 11703
 Shedlovsky, T.
 2627, 3547
 Sheehan, H. L. 9400
 Sheffield, F. M. L.
 1442, 6644, 12136
 Sheftel, A. G. 16435
 Sheldon, A. J. 6130
 Sheldon, C. 5250, 5251
 Sheldon, C. P. 2169
 Sheldon, D. 7456, 11268
 Sheldon, H. P. 16288
 Sheldon, J. M. 7431
 Shelford, V. E.
 10772, 12564, 16130
 Shelley, L. O. 7026
 Shellshear, J. L. 17030
 Shelton, E. K.
 386, 14972
 Shelton, F. A. 13858
 Shen, T. C. R. 2296
 5785, 16632
 Shepard, P. H.
 3003, 15608
 Shephardson, H. C.
 9657, 11223
 Shepherd, B. L. 1488
 Shepherd, H. R. 6587
 Shepherd, H. W. 1266
 Sheppard, M. 11014
 Shepperd, J. H. 15099
 Sher, B. C. 10090
 Sherbakoff, C. D. 3169

Sherburne, 3992
 Sherman, E. 6112
 Sherman, F. 14312
 Sherman, H. B. 7038
 Sherman, H. C. 2006
 Sherman, I. C. 14734
 Sherman, L. 8000
 Sherman, W. B. 477
 11561, 13493
 Sherman, W. C. 17731
 Sherrard, E. C. 3103
 Sherrill, J. W.
 9650, 13180
 Sherrin, W. R. 8423
 Sherry, S. 9237, 12643
 Sherry, S. P.
 1688, 3033
 Sherwood, C. R. 3722
 Sherwood, F. W.
 12851, 16507
 Sherwood, N. P.
 4434, 17346
 Sherwood, R. M.
 6251, 15125
 Shetter, D. S.
 14410, 14418
 Shettles, L. B.
 12653, 14681
 Shevchenko, Y. G. 4334
 Shewan, J. M.
 10055, 10056
 Shibata, S. 13497
 Shideman, E. R. 13178
 Shields, A. A. 10810
 Shields, J. B.
 5877, 14550
 Shields, S. E. 12217
 Shier, F. L. 15388
 Shigeno, K. 906, 6101
 Shigley, J. F. 13036
 Shih, H. E. 10509
 Shih, L. 3113
 Shima, I. 5786, 12989
 Shima, K. 9084
 Shimada, K. 3222
 Shimada, T. 9129
 16372, 16570
 Shimamura, M. 7804
 11255, 11256
 Shimkin, M. B. 14906
 Shimwell, J. M. 8336
 Shimke, N. 16155
 Shinn, L. E.
 538, 1062, 2662
 9937, 11798, 13710
 Shinohara, K. 9180
 Shippe, L. M. 370
 Shipley, R. A. 5645
 11070, 12643
 Shipp, H. L. 2733
 Shires, E. B. S. Jr.
 14800
 Shirko, V. N. 15881
 Shirlaw, J. F. 14187
 17394, 17913
 Shirley, H. L. 15774
 Shirley, R. G. 17255
 Shive, J. W. 3135
 12116, 13979, 14449
 Shively, S. B. 16265
 Shivrini, A. N. 4878
 Shlaer, S. 12643
 Shlaifer, A. 434
 Shmuck, A. 16160
 Shock, N. W.
 872, 2276, 7728
 12643, 14527, 14770
 Shockley, C. 12433
 Shoemaker, C. R. 3308
 Shoemaker, H. H.
 14697
 Shone, H. R.
 4621, 4622
 Shook, W. B. 6252
 Shope, P. F. 1080
 Shope, R. E. 8167
 11628, 16905
 Shore, A. 1883
 Shore, J. 14871
 Shore, L. E. 724
 Shore, R. 7717
 Shorr, E. 9354
 12643, 12812, 12990
 Short, D. M. 2526
 11523, 16503
 Shotwell, R. L. 1498
 Shout, O. S. 12495
 Shourie, K. L. 10960
 Showalter, H. M. 4801
 Shrader, E. L. 5709
 Shreeve, K. E. 13178
 Shreve, B. 5166
 Shreve, E. B. 3490
 Shreve, F. 12481, 16266
 Shrimpton, E. A. G.
 14809

- Shriner, R. L., 11257
Shrock, R. R., 6771
Shronts, J. F., 15389
Shukers, C. F., 311
Shukry, H., 2350
Shull, A. F., 12383
Shull, C. A., 10341
10703, 15790
Shull, S. P., 15790
Shulman, I., 4090
12643, 18178
Shulov, A., 17201
Shumway, N. P., 5656
Shunk, I. V., 14381
Shurrager, P. S., 12643
Shutak, V., 1233
Shute, E., 14645
Shute, P. G., 6153
8662, 13549, 14188
14189, 14190, 15178
Sia, R. H. F., 8238
8245, 17347
Sibson, R. B., 14300
Sibuya, F., 12674
Sichel, F. J. M., 12643
Sickles, G. M., 2579
Siddons, L. B., 12226, 18008
Sideris, C. P., 5692, 15767
Sidwell, A. E. Jr., 1951
Siebenmann, C., 4510, 4664
Siebert, H., 15569
Siegel, L., 10877
Siegel, R., 18132
Sieglar, E. A., 11928, 15889
Sieglar, E. H., 10401, 12239
Sieglinger, J. B., 11954
Siegrist, M., 5278
Siegwart, 2807
Siemasko, W., 8406
Siemens, B. W. L., 6198
Sievers, O., 2609, 12608
Sigmond, A. A. J. De, 2965
Siha, T. S., 3261
12690, 12788, 13711
Sikama, Y., 15385
16020, 17926
Sikl, H., 578
Sikuma, K., 9181
Sikakova, A., 9504
Sikler, R. H., 13348
Silberberg, M., 5646
9211, 9212, 9373
Silberberg, R., 5646
Silberschmidt, K., 12137, 14069
Silberstein, L., 4955
Silbert, S., 13421
Siler, J. F., 4665, 15482
Siler, K. A., 4063
Siller, F. K., 8283
Silva, C. A. de, 2999
Silva, D. J. da, 313
Silva, M. R. de, 10937
Silva, R., 15244
Silva-Lafrentz, O., 12322
Silveira, F., 5387
Silver, M. L., 14475
Silverman, D. N., 17203
Silverman, M., 10057, 13712
Silverman, W. S., 13717
Silvestri, F., 8801
Silvette, H., 7538
Simcoe, W. J., 6751
Simeone, F. A., 460, 7523
Siminovitich, D., 6609
Simkins, S., 6710
Simmonds, F. A. H., 7865
Simmonds, N., 8307
Simmonds, P. M., 1484
10348, 17758
Simmons, C. F., 13861
Simmons, J., 4350
Simmons, J. R., 10825
Simmons, J. S., 12270
Simmons, K., 564
Simmons, M. P., 8259
Simmons, V. L., 16195
Simola, P. E., 804
Simon, A., 3914
4153, 14853
Simon, F., 6034
6800, 14202, 18038
Simon, F. A., 13483, 17204
Simon, I., 16811
Simon, M., 6463, 6464, 6465
6643, 15532, 17574
Simon, S., 9107
Simon, T., 1949
Simonart, A., 5763
Simonart, P., 8596
Simondis, A. O., 4813, 16122
Simonet, M., 1120
Simonetta, B., 13328
Simonis, W., 12087
Simonnet, H., 1949, 12991
Simons, H., 1584
10004, 11824, 12271
Simons, J., 10495
Simonsen, D. G., 9356
Simpson, D. M., 1481
Simpson, G. C., 12473
Simpson, G. G., 7038
7053, 7054
Simpson, J. F. H., 129
Simpson, J. M., 5202
Simpson, M. E., 14622, 16615
Simpson, R. M., 2254
Simpson, T. W., 7027
Sinclair, H. M., 5492
Sinclair, J. W., 11506, 11507
Sinclair, M. W., 13484
Sinclair, W. B., 14103, 15584
Sinden, J. W., 11986
Sindram, I. S., 7549
Sinelnikov, S. I., 865
Singer, R., 6356
11825, 15462
Singer, R. B., 16337
Singer-Brooks, C. H., 17123
Singh, B. J., 12013
Singh, B. N., 1721
1730, 6486, 8915
10724, 13998, 14013
15742, 16267, 17436
Singh, D., 2956
Singh, H., 15211
Singh, L., 4053, 13098
Singh, J., 15211
Singh, L. B., 6486
Singh, S. S. L., 2957
Singhi, B. N., 13836
Singleton, R., 5331
Sinha, H. K., 9566, 9567
Sinha, J. N., 10270
Sinnatamby, G. R., 5753
Sinnott, E. W., 3455
10171, 17560
Sinton, J. A., 6153
8187, 9912, 13549
14189, 14190, 15178
Sioli, F., 8710
Sipe, F. P., 4745
Sipe, G. R., 17112
Sipek, B. V., 10706
Siple, P. A., 7216
Sirdar, J. N., 10989
Sisakian, N., 15775
Sise, H. S., 7383
Sisima, S., 11562
Sison, P., 5039
Sissineh, G., 12014
Sisson, W. A., 3104, 6445
Sisto, C., 9156
Sjuri, E., 14844, 14845
Sitton, B. G., 15609
Sivickis, P., 11465
Sivickis, P. B., 11466
Sixta, M., 11431
Sizer, I. W., 12675
Sjoberg, K., 4417
Sjoberg, S. G., 8239
Sjogren, H., 9482
Sjoland, N. O., 11770
Sjollem, A., 15386
Sjote, I. P., 762
Sjovqvist, O., 7668
Sjogren, H., 13284
Sjoststrand, T., 5698
12643, 16572
Sjovall, E., 2370
Sjovall, M., 11826
Skalijska, M., 5293
Skaptason, J. B., 1499
Skelding, A. D., 11929
Skeril, B., 5942, 17031
Skilbeck, D., 4845
Skinner, C. E., 17437
Skinner, H. T., 1361
Skinner, J. H., 13855
13856, 13857
Skinner, J. J., 3004
Skinner, J. T., 12643
Skoglund, C. R., 16686
Skog, F., 4919
Skorkowski, E., 4406
Skottsberg, C., 6426, 8438
Skow, R. K., 8095
Skramlik, E. V., 237
238, 239, 240
Skrotskii, E. B., 907
Skuderna, A. W., 13815
Skuja, H., 2794
Skupienksi, F. X., 9025
Skurnik, L., 14557
Slack, H. D., 1731, 7122
Sladek, J., 648
Slanetz, L. W., 8242
Slater, D. W., 17003
Slatineano, A., 6199
Slaughter, D., 13178
Slavin, G., 958
Slesinger, H. A., 7868
Sleumer, H., 2881, 4790, 10153
10154, 15507, 15508
Slichter, C. S., 12462
Sliosberg, A., 14562
Sloan, L. L., 16393, 16394
Sloan, S. L., 10199
Sloane, B. L., 1145
Slonaker, J. R., 16465
Slooten, D. F. v., 10694
Slopek, S., 908
Sloss, L. L., 10535
Sloss, J., 16436
Slowata, S. S., 12129
Sluiter, C. E., 7686, 9498
Slutskaia, M. M., 907
Sluys-Meer, F. C., 12049
van der, 13339
Slyper, E. J., 13339
Smadel, J. E., 2567, 2624, 2627
4511, 10992, 13485
Small, J. K., 6376
Small, L., 14440
Smalley, H. R., 11955
Smallman, B. N., 1503
Smaragdova, N. P., 13002
Smart, H. F., 13674, 13675
Smart, R. F., 1085
Smead, J. L., 5230
Smedley, E. M., 6684
Smedley-Maclean, I., 5478, 7440, 7447
Smelser, A. W., 3500
Smelser, G. K., 3915
7971, 9698, 14973
Smiley, D. Jr., 5219
Smirnov, A. I., 6623
Smith, B., 17360
Smith, A. C., 2365
8439, 10293
Smith, A. D. B., 15100
Smith, A. E., 7550, 14609
Smith, A. H., 4789, 7571, 8398
9162, 11827, 15463
Smith, A. J. M., 10313
Smith, A. K., 13837
Smith, A. L., 1481
Smith, A. M., 6001, 17398
Smith, A. R., 5872
Smith, B. B., 8969
Smith, C., 202
Smith, C. A. H., 14555
Smith, C. E., 5045, 15270
Smith, C. F., 5240
6918, 7038
Smith, C. H., 14869
Smith, C. L., 3200, 5601
5676, 11993, 12073
12220, 13909, 13987
Smith, C. O., 1482
14085, 17495
Smith, C. R., 966
Smith, C. S., 6545
Smith, D., 9888
Smith, D. C., 6588, 14663
Smith, D. J., 17495
Smith, D. J. W., 8196, 8210
Smith, D. T., 4262, 8250
8251, 11648, 13273
Smith, D. W., 16914
Smith, E., 2107
Smith, E. A., 12543
Smith, E. C., 629
Smith, E. C. B., 9808
9809, 9822, 10058
Smith, E. E., 395
Smith, E. L., 1380, 3084
7470, 7473, 12643
Smith, E. P., 12578
Smith, E. V., 16283, 16284
16288, 16289
Smith, E. V. D., 4512
Smith, F., 17348
Smith, F. B., 1044, 1049
Smith, F. F., 10416
Smith, F. H., 45, 12355
Smith, F. J., 13550
Smith, F. L., 2nd, 9670
Smith, F. R., 4540, 8342
Smith, G., 10059, 11828
Smith, G. E. P., 7175
Smith, G. H., 11563
Smith, G. L., 5040
Smith, G. M., 582
3479, 11300, 16854
Smith, H. B., 15747
Smith, H. E., 4538
Smith, H. H., 1007, 1784
7440, 9879, 16188
Smith, H. M., 3390, 6970
Smith, H. P., 3654, 7333
7392, 10944, 11269
12759, 12770, 16553
Smith, H. S., 9004
Smith, H. V., 10099
Smith, H. W., 7244
7935, 9531, 12643
Smith, J., 1001, 7456
Smith, J. A. B., 305
306, 13362
Smith, J. B., 3169, 13178
Smith, J. G., 1243
Smith, J. H., 8614
Smith, J. H. C., 14440
Smith, J. L. B., 1639, 18049
Smith, K. D., 7926
Smith, K. E., 14932
Smith, K. M., 1438
8615, 15266
Smith, K. U., 12643, 16675
Smith, L., 190, 191
Smith, L. B., 2828A
2841, 11199, 13728
Smith, L. E., 1528, 10401
Smith, L. de S., 15162, 15424
Smith, L. H., 2964
15684, 18105
Smith, L. M., 1529
Smith, L. W., 8000
Smith, M. A., 3108
Smith, M. C., 3719
Smith, M. D., 909
Smith, M. E., 10934, 12757
Smith, M. G., 2581, 6164
11617, 11620, 15247
Smith, M. I., 16812
Smith, M. L., 910, 911
Smith, M. M., 4623, 4624
Smith, M. W., 10814
Smith, N. R., 1686, 6300
Smith, O., 4846
8473, 13910
Smith, P. E., 11413, 16605
Smith, P. G., 16367
Smith, P. K., 201, 506, 2371
4073, 12643, 12654
13133, 13178, 16307
Smith, R. B. Jr., 1323
Smith, R. C., 1487
1488, 1689
Smith, R. G., 13178
Smith, R. H., 1530, 15898
Smith, R. I., 11084
Smith, R. S., 15331
Smith, R. W., 12457, 17877
Smith, S. E., 12557
Smith, S. G., 2063, 3726
Smith, S. L., 338
Smith, T. E., 1456, 15815
Smith, W., 301
5752, 7647, 9954
Smith, W. A., 16876
Smith, W. C., 13654
Smith, W. H., 10230, 10231
Smith, W. K., 17395
Smith, W. P., 7038
Smith, W. W., 14672
Smithburn, K. C., 912, 2569, 8152
8153, 11708, 17315
Smock, R. M., 11987
Smolovskaja, E. Ia., 11432
Smreczynski, S., 771
Smul, J. S., 2580, 3764
Smuts, D. B., 16449
16472, 16484
Smyth, C. J., 9408
Smyth, D. H., 9274
Smyth, E. M., 7366
Smythe, C. V., 2732
Smythes, E. S., 1267
Smythies, E. A., 9031, 10271
Snapp, E., 12643
Snapp, O. I., 6695
Snapper, I., 3650
Snell, A. M., 5839
9269, 11285, 11344
Snell, E. E., 6318, 17470
Snell, G. D., 5476
Snell, K., 17600
Snellman, B., 16879
Snijders, E. P., 8208
Snook, L. C., 3688, 5511
Snow, A. G. Jr., 13955
Snow, C. E., 15057
Snow, G. A., 7277
Snyder, C. D., 361, 3765
Snyder, F. F., 11113, 12648
Snyder, L. H., 7163, 7854
Snyder, M. L., 17316
Snyder, R. G., 9938
Snyder, R. K., 1329, 16395
Snyder, T. E., 3373, 5056
Snyder, W. C., 10349, 17759
So, K., 6601
So, T., 8154
Soares, R. E., 15428
Sobel, A. E., 16373
Sobel, B. A., 16373
Sobornheim, G., 11709
Sobotka, H., 3867
Socolov, D., 5335
Sodeman, W. A., 241
1945, 4095
Soderstrom, G. F., 281
Soderwall, A. L., 3938
Sody, H. J. V., 1661
Sody, L., 1305
Soehngen, N. L., 16314
Sokonto, R., 4177
Sogliani, G., 10938
Sohier, R., 6102
6103, 13486, 17205
Sohval, A. R., 11175
Solka, A., 3352
Sokoloff, B., 2653
Sokolov, R. A., 11200
Sokoray, L., 4154
Solacolu, T., 46
14006, 14086
Solandt, D. Y., 12643, 16746
Solari, E., 6563
Solario, G., 17317, 17349
Solberg, A. N., 5264
Soldati, L. de, 7739
Soley, M. H., 372
12643, 13301, 14527
Solkina, A. P., 15809
Soll, S. N., 16759
Solla, R., 12496
Sollberger, D. E., 5254
Sollmann, T. H., 4155
Solnitzky, O., 7958
Soloff, L., 2302
Solomon, A. P., 7088
Soloway, D., 12992
Soltan, O., 5357
Somer, E. de, 4096, 7729
Someren, V. D. v., 1568
Somers, R. B. U., 11607
Someya, A., 13487, 13488
Somma, A. A. di, 673
Somme, O. M., 4695
Sommer, J., 5708, 11201
Sommer, S. C., 17155
Sonck, C. E., 2881A

AUTHOR INDEX

Sonderhoff-Stoneburg

Sonderhoff, R., 13676
 Sonneborn, T. M., 3269
 Soekne, A. M., 15128
 Soos, A., 8739
 Sopauskas, J., 4030
 Soper, F. L., 6218
 Soper, J. D., 5280, 5252
 Soper, W. B., 11710
 Soraci, F. A., 14136
 Sorauer, P., 10878
 Sørensen, A., 11501
 Sørensen, E., 4229
 Sørensen, T., 3514
 Sorenson, C. J., 15907
 Sorris, S. S., 541
 Sorrisby, A., 13196
 Soru, E., 13408
 Sós, J., 10971, 16818
 Sosa, A. H., 15679
 Sosa-Bourdoul, C., 10731
 Soskin, S., 2121, 2128
 3690, 7356, 9326
 9334, 12643, 16490
 Sossai, A., 14767
 Sotolongo, F., 6141
 6741, 14192
 Souci, S. W., 13862
 Souders, H. J., 9262, 16568
 Souges, R., 2914
 2915, 11930
 Souges, R., 11446
 Soukhov, K. S., 17791
 Soule, B. A., 10709
 Soule, M. H., 7081, 9860
 Sousa, G. de P., 13655
 Southby, R., 5064
 Souther, S. P., 11271
 Southern, B. L., 1474
 Southwell, T., 13200A, 15992
 Southwick, L., 13911, 13912
 Southwick, W. E., 1800
 8964, 10744
 Souto, A. B., 4518
 Souza Lopes, H. de, 1623, 15922
 Souza Pinto, G. de, 8663
 Sowls, L. K., 5420
 Sover, B., 5140
 Spadafina, L., 17349
 Spain, W. C., 6028
 14854, 17157
 Spangenberg, H. D., 14919
 Spanhoff, R. W., 9282, 9308
 Spanneda, A., 6104
 Spanner, L., 2916
 Spanner, R., 11361
 Sparkman, R., 12728
 Sparling, B. L., 2079
 Sparrow, F. K. Jr., 13787
 Sparrow, H., 1013
 15220, 15248
 Spaulding, F., 8742
 Spaulding, E. H., 10005
 17350, 17351
 Spaulding, P., 10369
 12168, 13956
 Speakman, C. R., 12643
 Specht, H., 13178, 14993
 Specter, B. K., 17914
 Speer, 4399
 Speer, F. R., 17607
 Speert, H., 427
 Speirs, M., 307
 Spek, J., 12655
 Spellberg, M. A., 12858, 15212
 Spence, A. W., 9658
 Spence, K. W., 7612, 9450
 Spence, M. J., 9970
 Spencer, E. L., 8169, 15340
 Spencer, H., 5019, 5021
 Spencer, H. J., 6624
 6625, 6626
 Spengler, J. J., 3474
 Sperber, E., 4924
 Sperling, G., 14554, 14555
 Sperry, C. O., 10826
 Sperry, J. C., 1117
 Sperry, W. M., 9131, 14440
 Spezzafumo, C., 1002, 13489
 Spicer, W. J., 5063
 Spiedel, T. D., 15038
 Spiegel, E. A., 4031

Spiegel-Adolf, M., 7917
 Spiegelberg, C. H., 1482
 Spiegelhoff, W., 4142
 Spielman, A., 9819
 Spielman, M. A., 12993
 Spier, E., 11028
 Spiers, M., 10961
 Spies, J. R., 13490
 Spies, T. D., 2110, 3953, 4265
 5841, 11345, 13274
 Spieth, H. T., 6938, 12410
 Spindler, F., 3767
 Spindler, L. A., 17915
 Spink, W., 9889
 10941, 13551
 Spinks, G. T., 1268
 Spisaro, J., 3756
 Spivey, R. C., 8759
 Spoehr, H. A., 12106
 Spoon, W., 3050
 Spoor, H. J., 12643
 Spoor, W. A., 3819, 14419
 8353
 Spotkov, E. M., 16693
 Spottitz, W., 11489
 Spottel, A. M., 17540
 Spotts, S. D. S., 4371
 Spragg, S. D. S., 2958
 Sprague, G. F., 15570
 8943, 15570
 Sprague, H. B., 16184
 Sprague, J. M., 5219
 5222, 7038
 Sprague, K. D., 12643
 Sprague, M. S., 7089
 Sprague, R., 14046, 15464
 Sprague, T. A., 7089
 10155, 11853A, 11872
 Sprague, V. G., 1202
 Sprekel, V. L., 7524
 Spring, W. C. Jr., 11586
 Springer, S., 10628, 18050
 Springholtz-Schmidt, A. J., 6756
 Sprinson, D. B., 7535
 Sprot, G. D., 5207
 Sproul, E. E., 16880
 Sprunt, D. H., 11114
 Spruyt, J. P., 3737
 5576, 9221
 Spurway, C. H., 6522
 Spurway, H., 16197
 Sreenivasan, A., 17621
 Srivastava, G. N., 6523
 Srivastava, D. D., 13777
 Stabler, R. M., 1585
 Stacey, J. W., 4773
 6393, 6394
 Stacey, M., 1053, 6302
 6319, 8594, 12726
 Stack, A. M., 16354
 Staderini, R., 7959
 Stadie, W. C., 7553
 Stadler, L. B., 2129
 Stadler, P., 9109
 Staehlin, S., 12683
 Staermose, V., 4666
 Stafford, E. S., 607
 Stafford, H. E., 11560
 Stager, K. E., 12458
 Stahl, W., 2512
 Stahler, N., 10455, 18020
 Stair, E. C., 13883
 Staker, E. V., 17603
 Stakman, E. C., 3169, 12151
 Stalfelt, M. G., 12088
 Stamatin, L., 2620
 13450, 13568, 13569
 Stamatin, N., 9890
 Stamborg, O. E., 1897
 Stammer, H. J., 12579
 Stamm v. Schleithelm, E., 7217
 Stamp, T. C., 15213
 Stanculescu, P., 14909
 Standen, J. H., 14047
 Standfuss, R., 8240
 Standley, 2865
 Standley, P. C., 2828A
 2865, 2882, 6437
 Stanely, E. B., 1204
 Stanfield, J. F., 10703
 Stangel, W. L., 11432
 Stanishevskaja, M. B., 921
 Stanislaus, M., 14604
 Stanokov, N. Z., 6437
 Stanley, A. J., 9308
 Stanley, E. B., 15101
 Stanley, L., 2738

Stanley, J., 1503, 1834
 Stanley, W. M., 1428, 3130
 7069, 15826, 15830
 15831, 17783, 17792
 Stanley, W. W., 10468
 Stannard, J. N., 9505
 12643, 16471
 Stanton, T. R., 1205, 1206
 Stapledon, R. G., 4847
 Star, F. J., 13178
 Stark, A. L., 3012
 Stark, F. L., 3169
 Stark, J. B., 17735
 Stark, W. H., 10091
 Starkenstein, E., 9568, 14855
 Starke, D. H., 8355
 Starkey, R. L., 5276
 6320, 10072, 17438
 Starkey, W. F., 3916
 3917, 16633, 16993
 Starkoff, O., 1599
 Starobinez, G. M., 878
 Staroselski, P. I., 9100
 Starr, G. H., 3159, 10379
 Starr, L., 12643, 12740
 Starv, Z., 11422
 Starzyk, J., 1003
 Stasney, J., 608
 2161, 3763, 9619
 Staub, H., 550
 Stauber, L. A., 10510
 Staunig, K., 7256
 Stauss, H., 9939
 Stead, E. A. Jr., 242
 5722, 11202, 13181
 Stead, E. F., 14301, 14302
 Steadman, L. A., 12643
 Stearns, L. A., 12179
 Stebbins, E. F., 9032
 Stebbins, G. L. Jr., 2883
 2884, 4777, 14365
 Stebler, A. M., 5240
 Stecher, R. M., 9612
 Stecher, W., 818
 Steck, I. E., 4065, 16747
 Stedman, E., 16644
 Steegmann, A. T., 16947
 Steeken, W. Jr., 4623
 Steele, A. G., 373
 429, 3651, 3977
 Steele, J. G., 2971
 Steele, J. M., 11203
 Steele, P. A., 17352
 Steele, T., 2046
 Steele, T. A., 11988
 Steelman, G. M., 1600, 17947
 Steen, C., 10892
 Steenbock, H., 272, 2058, 3716
 3717, 3741, 5547
 7495, 9240, 16526
 Steenis, O. G. J. v., 2901, 4791
 Steenken, W. Jr., 4624, 4625
 Steer, W., 10470
 Steere, W. C., 4653
 4748, 6372
 7082, 15480
 Stefanelli, A., 8038
 Stefanescu, T., 3335
 Stefano, F. di, 1687A, 3661
 15214, 3611
 Stefanovich, I. P., 14461
 Stefanski, W., 3284
 Steffen, H., 3515
 Steggerda, F. R., 484
 3938, 7459, 12643
 Steggerda, M., 16458
 Stehlé, H., 1207
 11911, 13778
 Stehle, R. L., 9374
 Stehlik, V., 6438
 Stehr, L., 7355
 Steiger, M., 3918, 3919
 Steigerwald, F., 236
 Steil, W. N., 17561
 Steiman, S. E., 11158
 12643, 16641
 Stein, E., 8944
 Stein, H. J., 2032
 Stein, L., 9197
 Stein, W. H., 4362
 7290, 16384
 Steinbach, H. B., 12643
 Steinbach, M. M., 14920
 Steinberg, A., 219
 389, 9375, 12643
 Steinberg, A. G., 1781, 7154

Steinberg, I., 14775
 Steinberg, E. A., 3057
 12100, 17675
 Steinböck, O., 12614
 Steincrohn, P. J., 1936
 Steiner, A., 499
 1996, 9524
 Steiner, G., 16000
 16948, 17772
 Steiner, H. M., 12180
 Steiner, L. F., 14113, 14149
 Steiner, M., 5662, 8415
 Steiner, P. E., 7856
 Steinfatt, O., 5203
 Steingmann, F., 551
 Steinhart, H., 17078
 Steinhart, J., 12676
 Steinhilber, E. A., 17471
 4648, 17471
 Steinhilber, H., 14538
 Steiningger, G., 16824
 Steinitz, F. S., 12643
 Steinitz, K., 1936, 9578
 Steinmann, B., 1937
 5493, 16437
 Steinmauer, H., 913
 Steinwender, J., 14401
 Stekel, W., 12474
 Stekol, J. A., 3680
 7427, 9191
 Stella, G., 9275, 12928
 Stenberg, G., 2463
 Stengel, A. Jr., 7521
 Stenhausen, E., 5436
 5437, 16295
 Stensjö, E. A.: S., 6971
 Stenström, T., 2280
 Stephens, C. G., 16268
 Stephens, F. L., 15465
 Stephens, J. G., 82
 Stephens, J. G., 1983
 7384, 7385
 Stephens, R. P., 10380
 Stephens, T. C., 8849
 Stephenson, C. S., 4216
 Stephenson, G. C., 3019
 Stephenson, H. C., 15387
 Stephenson, L. W., 5121, 5122
 Stephenson, M., 296, 10092
 Stephenson, T. A., 9005
 Stepp, W., 4156
 Sterges, A. J., 4826, 17612
 Stern, B. E., 7470
 Stern, C., 39
 7155, 7156, 8904
 Stern, E., 3474
 Stern, F. C., 6427
 Stern, K. G., 11070, 16329
 Stern, P., 5647
 Sternberg, C. M., 14291
 Sterne, M., 6321
 Stetson, R. H., 471
 Steude, R., 6275
 Steudel, W., 666
 Steusloff, U., 14394
 Steven, D., 12643
 Steven, H. M., 4900
 Stevens, C., 11430
 Stevens, F. A., 6105, 13491
 Stevens, H., 9837, 13490
 Stevens, H. E., 12138
 Stevens, H. P., 6267
 Stevens, J. R., 14563
 Stevens, K. R., 2975
 Stevens, N. E., 5008, 17823
 Stevens, R. D., 1306
 Stevens, W. L., 5362, 5363
 Stevenson, F. J., 1739
 4848, 10362, 11956
 Stevenson, J. A., 15313
 Stevenson, K. S., 2369
 Stevenson, L. D., 9610
 Stevenson, T. M., 10732
 Steward, F. C., 15701
 Stewart, A., 10957, 16826
 Stewart, A. H., 2019
 Stewart, C. A., 10009, 13193
 Stewart, C. D., 17141
 Stewart, D., 16720
 Stewart, G. N., 11196, 12643
 Stewart, H. C., 2683, 7342
 Stewart, H. J., 4157, 7730

Stewart, H. L., 511, 2111, 2372
 6238, 7524, 7887
 9636, 12879, 14907
 Stewart, J. D., 3634, 11380
 Stewart, J. K., 1989
 Stewart, M. A., 1004
 10545, 15923
 Stewart, M. J., 14908
 Stewart, P. M., 12469
 Stewart, R. A., 9982
 Stewart, S. E., 17206
 Stewart, W. B., 12643
 Stewart, W. S., 15716
 Stewart-Anderson, B., 15319
 Steyermark, C. S., 10156
 Steyermark, J. A., 2885
 3281, 6436
 Steyn, D. G., 5787, 8328
 Steyskal, G., 12375
 Steyskal, G. C., 14257
 Stiasny, G., 6780
 Stiasny-Wijnhoff, G., 3287, 3288
 Stidolph, R. H. D., 10650
 Stieb, B., 2076
 5570, 5571
 Stiebeling, H. K., 2008, 5527
 Stieglitz, C. R. v., 4859, 4860
 Stieglitz, E. J., 14673
 Stiehler, R. D., 1964
 1990, 2203
 Stier, T. J. B., 15780
 Stieve, H., 15083
 Stiffler, W. C. Jr., 17255
 Stiles, B. F., 16099
 Stiles, C. W., 11711
 Stiles, K. A., 8965, 13349
 Stiles, M. H., 6182
 11671, 17326
 Stiles, W., 4990
 Stiles, W. S., 13059
 Stille, B., 8349
 Stiller, E. T., 14563
 Stillinger, C. R., 6357
 Stimpert, F. D., 6060
 6165, 15166, 15249
 Stinson, F. A., 17582
 Stipetic, E., 15001
 Stitewalt, M. A., 6792
 8916, 12294, 12295
 Stirm, F. E., 11012
 Stirrett, G. M., 12229
 Stirton, R. A., 5084
 8867, 10669
 Stitt, R. E., 10366, 13838
 Stoa, T. N., 8544, 17661
 Stock, A. H., 17173, 17207
 Stockholm, M., 7499, 12643
 Stocking, B. W., 13310
 Stockton, A. B., 7756
 Stockum, M. J. v., 2353
 Stockwell, W. P., 17513
 Stoddard, E. M., 12139
 Stoddard, S. E., 10745
 Stodola, F. H., 2775
 Stoesser, A. V., 7386
 Stofberg, F. J., 8639
 Stöhr, R., 299, 5545
 Stolia, I., 14909
 Stollowa, E. R., 2603
 Stoker, F., 11989, 13913
 Stokes, I. E., 15527
 Stokes, J. Jr., 2558
 2575, 17287
 Stokinger, H. E., 4158
 6157, 5215
 Stokstad, E. L. R., 9234
 Stotland, O. O., 4066
 Stoll, N. R., 1569
 Stolpe, M., 14303
 Stolte, L. A. M., 16616
 Stoltz, R. B., 13375
 Stomps, T. J., 7218
 Stone, A., 18009
 Stone, C. P., 896, 2190
 2191, 7244, 9376
 Stone, C. S., 4062
 Stone, F. G., 10997
 Stone, G. M., 1481
 Stone, M. W., 10406
 Stone, R. W., 17453
 Stone, W., 3211
 Stone, W. E., 5788
 Stone, W. S., 11721
 Stoneburg, C. A., 16496

Stoner, D., 14312
 Stoner, E. A., 5207, 16100
 Stookey, P. F., 4514, 13492
 Stopp, F., 9033
 Stoppel, R., 1406
 Storey, H. H., 1443
 4979, 10363
 Storey, M. H., 5160, 16054
 Stork, G. K. B., 5758
 Stormer, P., 8416
 Stormont, R. T., 13178
 Storrow, B., 1875
 Stravick, O. A., 11013
 Story, R. V., 1915
 Storz, H., 552
 Stott, L. H., 16396
 Stotz, E., 7267
 Stoudt, J. H., 14420
 Stoughton, R. W., 13178
 Stout, A. B., 83, 7093
 Stout, A. P., 2378
 Stout, G. L., 17793
 Stout, P. R., 10297
 13972, 15748, 17671
 Stoutmyer, V. T., 13988
 Stovall, W. D., 8273
 Stover, R. F., 5648
 Stowell, A., 9622
 Stracener, C. L., 5048
 Strachan, P. D., 4667
 Strack, E., 13182
 Sraaen, V. V., 12335
 Sraib, W., 1425
 Sraim, H. H., 196, 5555
 Srake, R. P., 3686
 Strand, A. L., 10461
 Strandell, H. H., 4252
 Strandskov, H. H., 7164, 14374
 Straneo, S. L., 3330, 10597
 Stransky, E., 2031
 Strantz, A. V., 4849
 Strasburger, E. H., 4032, 16205
 Strat, C., 14581
 Straub, F. B., 14780, 16310
 Straub, J., 14974
 Straub, W., 5528
 Straus, H. W., 924, 8161
 Straus, M., 2057
 Straus, H., 4033
 Straus, M. B., 14854
 Strayhorn, W. D., 3962
 Srebeysko, P. V., 12059
 Strecker, E. A., 16949
 Streef, G. M., 1991
 1992, 5512, 7387
 Streef-Spaan, A. M., 1992, 7387
 Street, H. R., 3729
 Street, J. A., 6157, 9919
 Street, P. A. R., 16197
 Street, S. F., 2262, 12643
 Streeter, A., 12643
 Streets, R. B., 1482
 17841, 17842
 Strelin, G., 11467
 Strelkova, O., 4774
 Strell, M., 17728
 Streng, K. O., 2597
 Streng, O., 4515
 Strepkov, S. M., 1841
 1842, 1413
 Streukens, T., 18193
 Streukens, T. L. Jr., 11697
 Strickey, M., 4374
 Strickland, A. G., 1483
 Strickland, A. G. R., 6772, 17927
 Strickland, C., 14191, 15972
 Strickland, E. H., 12203
 Strickler, H., 13142
 Strietmann, W. L., 2619
 Stringfield, G. H., 2959
 Ströder, J., 1063
 Ströer, W. F. H., 11461, 17059
 Strohecker, H. F., 3357
 Strohl, A., 180
 Ström, J., 1993
 Ström, K. M., 12615
 Stromer, E., 17032
 Stromeyer, W., 6489
 Strong, F. C., 1426
 Strong, F. M., 6318, 17470
 Strong, L. A., 5129

Strong, L. C., 249
 591, 609, 2374
 8958, 11800, 16881
 Strong, M. C., 8625
 Stroud, C. M., 17187
 Strouhal, H., 8760
 10574, 12336
 14250, 16021
 Struck, H. C., 2263, 12643
 Struckmeyer, B. E., 10172
 Strugger, S., 4922, 15749
 Strughold, H., 2244
 Strugnell, E. J., 18957
 Strukov, A. I., 628
 Strumia, M. M., 9891
 Struppler, V., 11400
 Stuart, C. A., 11568
 15170, 15171
 Stuart, E. H., 13552
 Stuart, J. A., 12643
 Stuart, N. W., 4920, 10304
 Stuart, R. D., 6200
 Stuart-Harris, C. H., 620, 621
 627, 8212, 11621
 Stubbe, A. E., 5348
 Stubbs, H., 6651
 Stubbs, G., 15002
 Stuber, E., 130
 Stuckey, I. H., 4946
 Stückrad, H., 7805
 Studer, A., 2333
 Studer, S., 12047
 Studnicka, F. K., 16123
 Studnitz, G. v., 462
 Stull, A., 11561
 18493, 15142
 Stultz, H. T., 10465
 Stundt, K., 8298
 Stunkard, H. W., 1601
 Sturdza, S. A., 13494, 13495
 Sturevant, A. H., 1736
 Sturgeon, M. T., 8305
 Sturges, S., 1937, 11290
 Sturkie, D. G., 8472
 Sturkie, P. D., 1772
 Sturm, A., 7808, 11414
 Sturtevant, A. H., 3442, 10726
 Sturtevant, M. W., 14571
 Stutzman, J. W., 409, 12643
 Styles, S. A., 13995
 Su, T. F., 839, 9779
 Suárez, E. H., 4541, 4602
 Suarez, R. M., 11346
 Subbarow, Y., 16515
 16527, 17472
 Subrahmanyam, V., 4689
 Subramaniam, L. S., 1427
 Subramaniam, M. K., 1732, 1733
 2479, 3290, 14354
 Suda, K., 8679
 Sudds, R. H., 15589, 15610
 Suden, C. tum., 9577
 Sudibyo, R. M. S., 9611
 Suer, W. J., 14449
 14450, 16298
 Suessenguth, K., 11144
 Suffolk, S. F., 5595, 16796
 Suffolk and Berkshire, Earl of, 7807
 Sugai, T., 13554
 Sugar, O., 463
 Sugie, E., 15496
 Sugiyama, K., 14910
 Sugiyama, G., 7105
 9192, 9192
 9198, 9569
 Suhonen, P., 14557
 Suit, R. F., 3152, 3160
 5002, 6685, 14093
 Suita, N., 3451
 Sukhenko, F. T., 9090
 Sulit, M. D., 1343, 15509
 Sulkin, S. E., 9892, 11672, 15226
 15227, 15250, 15251
 Sullivan, E. R., 364
 2631, 14921, 15412
 Sullivan, H. R., 10093
 Sullivan, J. T., 17601
 Sullivan, M. X., 9123

Sullivan, N. P., 2112
 8737, 17353
 Sullivan, W. A., 2041, 2042
 Sulma, T., 17505
 Sulman, F., 7551
 9390, 9391
 Sulzberger, M. B., 4516
 13474, 15140, 15147
 Sumiyosi, T., 17460
 Summerland, S. A., 1523
 Summers, E. M., 12159
 Summers, W. A., 6801
 Sumner, F. B., 11122
 Sumner, J. B., 1844, 3563
 Sund, O., 156, 1876
 Sundararajan, A. R., 814
 Sundelin, F., 10939
 Sunderland, S., 683, 16971
 Sunderman, F. W., 3674
 Sunder-Plassmann, P., 818
 Sundför, H., 8966
 Sundgren, N., 9661, 9662
 Sung, C., 7580
 Sunthakar, S. R., 4907
 Sunthoff, V., 592
 Suomalainen, H., 8850
 Surber, E. W., 14421
 Sure, B., 340, 692, 11347
 18275, 14975, 16528
 Sureau, M., 14751
 Surrarier, T. C., 1782
 Suster, P. M., 435
 Sutherland, A. J., 12835
 Sutherland, G., 243
 Sutherland, G. F., 12643
 Sutherland, M., 1050
 Sutro, C. J., 14999
 Sutter, E., 16086
 16087, 16101
 Sutton, A. H., 5113
 Sutton, E., 16189
 Sutton, G. M., 10651
 Sutton, J. A., 2972
 Sutton, W. R., 270
 Sutafov, L. S., 10848
 Suwa, S., 1297
 Suwo, M., 17318
 Suzuk, C., 5859, 5862
 Suzuki, C., 914
 Suzuki, H., 5009
 Suzuki, M., 16374
 Suzuki, S., 8154, 9673
 10588, 14242, 14243
 Suzuski, K., 7157
 Svanberg, O., 6455
 Svartz, N., 4288
 Svee, F., 558, 9570
 Svedberg, T., 225, 12656
 Svensson, H., 197
 Sverdrup, H. U., 16247
 Svihla, A., 7038
 Svihla, R. D., 7038
 Svoren, J. O., 8062
 Swain, R. B., 10402, 18030
 Swaminathan, M., 220, 5523
 Swann, H. G., 397, 9659
 9660, 9663, 11354
 Swanson, D., 6554, 9399
 Swanson, E. E., 523
 Swanson, H., 17383
 Swanson, H. S., 11614
 Swanson, L. E., 17916
 Swanson, W. W., 2048
 Swanton, J. R., 5240
 Swaroop, S., 1005
 Swart, F., 15680
 Swartzwelder, J. C., 1570, 6757
 Sweany, H. C., 4239
 8241, 10090, 13247
 Sweeney, A. R. Jr., 12979
 Sweeney, H. M., 7719, 12643
 Sweet, A. T., 1223
 Sweet, E. D., 5330
 Sweet, H. E., 7187
 Sweet, J. E., 12643
 Sweet, R. D., 15602
 Sweet, W. C., 3248
 Swen, W. Y., 12792
 Swenson, T. L., 2513
 Swett, F. H., 11454
 Swett, W. W., 6002
 Swift, R. W., 16446, 16473
 Swindle, P. F., 2433
 Swineford, O. Jr., 5789

Swingle, H. S., 16283, 16284
 Swingle, W. T., 13761
 Swinnerton, H. H., 3443
 Swinyard, C. A., 10878
 Swoboda, F., 6358, 6359
 15466, 17496, 17497
 Syddiq, M. M., 10444
 Sydenstricker, V. P., 11348
 Sydow, E., 10762
 Sydow, H., 8407, 8408, 8409
 17498, 17499, 17500
 17498, 17499, 17500
 Sykowski, P., 14664
 Sylva, K. J. A., 8509
 Sylva, Sister M., 4740
 Symes, C. B., 5064
 Symington, N. J., 8243
 Synder, F. F., 5677
 Syre, H., 4921
 Szafer, W., 10100, 10101
 Szántó, G., 11337
 Szantoch, Z., 684
 Szatala, O., 10706
 Szathmary, J., 6098
 6125, 9905
 9906, 9907
 Szathmary, J. v., 915
 Szezeklik, E., 631
 Szelenyi, G. v., 12390
 Szelenyi, G. I., 17861
 Szent-Ivány, J. v., 10618
 Szepesfalvi, J., 10706
 Szepsenwol, J., 7888, 15084
 Szidat, L., 14210, 14211
 Szlepowna, R., 3358
 Szobonya, M., 16708
 Szulc, J., 12912
 Szwabowicz, A., 11258
 Szymkiewicz, D., 5283

T

Tabenkin, B., 11773
 Tada, S., 17407
 Taddia, L., 8711
 Tauber, C., 8978
 Taffel, M., 200, 14532
 Taft, A. E., 181
 Taft, C. E., 6333
 Tagawa, M., 1108
 2818, 2819, 17508
 Tagawa, T., 4941
 Tager, B. N., 14972
 Taggart, R. A., 198
 Taguini, A. C., 2142
 Tainter, M. L., 2292
 5513, 11212, 11259
 Takacs, W. S., 920
 6106, 17278
 Takahashi, K., 9261
 Takahashi, Y., 10094, 13459
 Takai, T., 14733
 Takaku, T., 7148
 Taka-Tsukasa, Prince, 8851
 Takaya, H., 5961, 5961A
 Takeda, Y., 16509
 Takehara, H., 12677, 12913
 Takeshita, T., 1214
 Takeuchi, H., 17354
 Takeya, R., 916
 Takimoto, S., 4966, 14054
 Takita, J., 8154, 13498
 Talaat, M., 7674
 12713, 14493, 16706
 Talbert, T. J., 15811
 Talbot, M., 12886
 Talbot, M. W., 12598
 Talbot, N. B., 2019
 12967, 14634
 14870, 16826
 Taliaferro, W. H., 945, 11572
 Tallman, R. C., 5610
 Tallon, G., 2902
 Tamblin, N., 17767
 Tamiya, H., 6582, 15778
 Tamm, O., 13958
 Tamura, T., 12678
 Tanabe, S., 5868
 Tanabe, Y., 3978
 16356, 16375, 16882
 Tanaka, H., 7028, 7029
 Tanaka, J., 341
 Tanaka, K., 17148
 Tanaka, N., 7106
 Tanaka, O., 8738

Tanaka, S., 13499
 13500, 16376
 Tanaka, T., 1269
 8382, 11990
 Tan Eng Dhong, 4177
 T'Ang, B. H. Y., 8257
 Tang, C. C., 17917
 Tang, F., 8308
 Tang, Y., 1757
 T'Ang, A. V., 3583
 Tanis, H. E. Jr., 12696
 Tannenbaum, A., 10893
 Tannenber, J., 4299
 Tanner, F. W., 4668
 15292, 15392
 Tanouye, T., 8221
 Tanturi, C. A., 14856
 Tappier, S., 9429
 Tapke, V. F., 3169
 Tappi, G., 9106
 Taquini, A. C., 3952, 7731
 Taranetz, A. J., 12427
 Tarassuk, N. P., 17091
 Tardieu-Blot, L., 1109
 Tariov, I. M., 12694, 16950
 Tarnutzer, C. A., 17418
 Tarr, H. L. A., 1535
 1536, 1537
 Tartar, V., 11468
 Tarver, H., 12811
 Tarwidowa, H., 7107
 Tarzwell, C. M., 14422
 Tasaki, L., 4034
 4035, 14735
 Taschdjan, E., 13329
 Tasiro, K., 939
 Taskin, M. J., 11754
 Tasugi, H., 10350
 Tatar, T., 2589
 Tate, G. H. H., 7055
 Tate, H. D., 15832
 Tatewaki, M., 1160
 Tatge, E., 5278
 Tatibana, Z., 16655, 16748
 Tattersall, W. M., 1850
 16022, 17972
 Tattersfield, F., 6474
 Tatum, A. L., 542, 13178
 13188, 14826, 15963
 Tatum, E. L., 3462, 5649
 Tatum, H. J., 18178
 Tattano, S., 47, 48
 Taubenhau, J. J., 1481, 17805
 Taubenhau, M., 14976
 Tauber, F. W., 16353
 Tauber, H., 3566, 3594
 Tausch, M., 9430
 Taussig, H., 4120
 Taussig, H. B., 500, 501
 763, 4396, 5967
 Taut, K., 17118
 Tavcar, A., 84
 Tax, H., 6121
 Tayeau, F., 12729, 13501
 Takaku, T., 11415
 Taylor, A. C., 5430
 Taylor, A. E., 15578, 15583
 Taylor, C. A., 1270, 15612
 Taylor, C. B., 1051, 2743
 Taylor, C. V., 6772, 17927
 Taylor, E. L., 15973, 17918
 Taylor, E. M., 4517, 17355
 Taylor, F. H. L., 255, 9628
 Taylor, F. S., 10698
 Taylor, G., 2333
 3418, 6432, 15287
 Taylor, G. F., 16544
 Taylor, G. L., 5358, 15169
 Taylor, H. M., 585
 Taylor, H. Y., 12272
 Taylor, J. S., 7030
 Taylor, J. W., 1208, 17602
 Taylor, L. W., 6025
 15126, 17101
 Taylor, M. M., 7693
 Taylor, M. S., 17509
 Taylor, M. W., 15106, 16543
 Taylor, R. M., 12643
 Taylor, S. G., 5863
 Taylor, S. G. 3rd., 14977
 Taylor, T. M. C., 4796, 17562

- Taylor, T. W. J., 14441
 Taylor, W. L., 16114
 Taylor, W. R., 11808, 13728
 Taylor, W. S., 10286
 Taylor, S. G., 16936
 Tazima, Y., 7158
 Tchchang, J. L., 6605, 6610
 Tchernavin, V., 764
 Tchibukmakher, N. B., 4509
 Tchijevsky, A. L., 9532
 Tchirkova, H. T., 15432
 Teague, R. S., 5650, 9377
 Tecson, A. L., 4879
 Teel, H. M., 416, 9409
 Tegtmeyer, M., 11515, 13389
 Teichler, G., 8188
 Teisinger, J., 7814
 Teissier, G., 12831
 Teitelman, S. L., 5811
 Teixeira de Carvalho, G., 3203
 Teixeira de Freitas, T. F., 17956
 Telford, I. R., 11159, 13313
 Teller, I., 6074
 Tellini, G., 12497
 Temple, E. M., 1314
 Templeman, W. G., 6573, 15717
 Templeton, R. D., 11024
 Tempin, E. H., 10210
 Tempin, E. J., 2974
 Templeton, B. C., 4792, 4802
 Ten Broeck, C., 2635
 Tenhet, J. N., 5041
 Tenin, T., 952
 Tenenbaum, M., 14680
 Tenney, B. Jr., 3879
 Tenore, T., 5437
 Tenor, E., 792
 Tenor, A. E., 8094, 8095
 Tenor, P. A., 16906
 Tenor, B. H., 12643
 Tenor, A., 9224
 Tenor, G. J., 10950
 Tenor, F., 13502
 Tenor, A. W., 898
 Tenor, J. K., 14312
 Tenor, E. F., 9201, 9202
 Tenor, H. L., 12643
 Tenor, S. J., 10985
 Tenor, J. W., 157
 Tenor, F. H., 12640
 Tenor, L. A., 12440
 Tenor, A., 8681
 Tenor, P. H., 12657
 Tenor, R. J. H., 7123
 Tenor, M., 3366
 Tenor, E. J., 6972
 Tenor, L. A., 14524, 16446
 Tenor, S. J., 7798, 9184
 Tenor, W., 10693
 Tenor, S. J., 12730, 12731
 Tenor, S. J., 1938
 Tenor, W. E., 15578
 Tenor, W. E., 1481, 4996
 Tenor, F. S., 15862
 Tenor, E. A., 14736
 Tenor, J. W., 16204
 Tenor, J. W., 15807
 Tenor, S. A., 3927
 Tenor, 7315, 9245
 Tenor, 12870, 12871, 16549
 Tenor, A. C., 15399
 Tenor, R. M., 11347
 Tenor, 13275, 14975
 Tenor, H., 15529
 Tenor, H. Bergh, 1801
 Tenor, O., 14156
 Tenor, F. H., 14378, 16907
 Tenor, D. R., 778, 2739
 Tenor, P. O., 9458, 12643
 Tenor, J. J., 13745
 Tenor, A., 3381, 12256
 Tenor, H., 2284
 Tenor, A., 3595
 Tenor, A. F., 15810
 Tenor, M. E., 12608
 Thielen, E. v., 13395
 Thiem, H., 10378
 Thiemann, A., 3202, 14258
 Thienes, C. H., 11216
 Thienes, R. H., 13178
 Thiessen, E. J., 10060
 Thimann, K. V., 1381
 Thimann, K. V., 6574, 11991
 Thimann, K. V., 13989, 17439
 Thirumalachar, M. J., 17760
 Thjotta, T., 2776
 Thjotta, T., 4695, 17122
 Thoai, N. v., 14579
 Thoenes, G., 3087
 Thomas, A. D., 8219
 Thomas, A. V., 10272
 Thomas, B., 10381, 13959
 Thomas, B., 1209
 Thomas, B. H., 9238
 Thomas, B. H., 9239, 15736
 Thomas, C. A., 8646
 Thomas, C. B., 2663
 Thomas, E. A., 14048
 Thomas, G., 13648
 Thomas, H. A., 110
 Thomas, H. E., 15863
 Thomas, H. E., 17748, 17843
 Thomas, H. E., 4980
 Thomas, J. A., 3608
 Thomas, J. E., 9270, 12643
 Thomas, J. E., 2294
 Thomas, J. W., 1756, 11857
 Thomas, L. E., 13484
 Thomas, L. E., 16379
 Thomas, L. J., 12301
 Thomas, R. C., 6675
 Thomas, R. P., 10347
 Thomas, W., 4914, 8567, 10298
 Thomas, W., 13977, 13978, 17676
 Thomas, W. L., 13599
 Thomassen, J., 9378, 12994
 Thomasset, L. F., 4407
 Thomen, L. E., 15696
 Thompson, C. M., 12128, 17761
 Thompson, A., 3114, 12127
 Thompson, D. J., 8510
 Thompson, E. C., 17623
 Thompson, E. G., 2960, 13839
 Thompson, F., 15940
 Thompson, F. C., 1209
 Thompson, G. B., 6706
 Thompson, H., 725
 Thompson, H. E. Jr., 9177
 Thompson, I., 12599
 Thompson, J. K., 678
 Thompson, J. W., 16144
 Thompson, K. W., 9372
 Thompson, L., 12643, 14687, 15024
 Thompson, L., 9974, 17356
 Thompson, M., 12643
 Thompson, M. R., 4123, 14806
 Thompson, P. K., 5863, 14977
 Thompson, R. C., 1369
 Thompson, R. C., 12538, 17696
 Thompson, R. E., 4732
 Thompson, R. L., 11622
 Thompson, R. W., 10417
 Thompson, S. A., 5790
 Thompson, S. V., 8066
 Thompson, W. F., 3392
 Thompson, W. L., 10403
 Thompson, W. O., 5863, 14977, 16936
 Thompson, W. P., 1749, 9614, 11204
 Thompson, W. S., 8309
 Thompson, A., 2685, 4685
 Thompson, S., 4253
 Thompson, V., 3920
 Thompson, A. L., 14304
 Thompson, D. L., 4285
 Thompson, J. G., 9859
 Thomson, J. R., 4850, 8474
 Thomson, R. C., 6707
 Thomson, S., 917, 4518
 Thomson, S. C., 704
 Thomson, T., 13960
 Thomson, W., 3698, 8728
 Thor, C. J. B., 11993
 Thorbeck, G., 5997
 Thorn, G. W., 3921
 Thorn, G. W., 7901, 9379
 Thorn, G. W., 14978, 16634
 Thörn, N., 1368
 Thornberry, H. H., 6658
 Thorne, F. H., 14857
 Thorne, G., 17957, 17958
 Thorne, R. S. W., 6271
 Thornthwaite, C. W., 16248
 Thornton, B. J., 10200
 Thornton, J., 12643
 Thornton, J. J., 14760
 Thornton, M. J., 9642
 Thornton, N. C., 1271
 Thornton, N. C., 6589, 12075, 17697
 Thorockay, M., 843
 Thorp, J., 10211
 Thorpe, M. R., 5161
 Thorpe, W. H., 5681
 Thorson, G., 8746
 Thoulless, R. H., 5688
 Throckmorton, R. I., 10201, 15613
 Thronsdon, A. H., 5513
 Thrupp, T. C., 8451
 Thung, T. H., 3133
 Thurbur, F. H., 13825
 Thuringer, J. M., 8364
 Thut, H. F., 12090
 Thygeson, P., 2628, 8213
 Tiberti, R., 11404
 Ticehurst, C. B., 18081
 Ticehurst, N. F., 14305
 Tidbury, G. E., 5309
 Tiedemann, M., 10762
 Tiedjens, V. A., 15614, 15702
 Tieg, E., 8598
 Tiennemann, A., 6906
 Tiffany, E. J., 8214
 Tiffany, L. H., 11809
 Tiffeneau, M., 13183, 14665
 Tiffney, W. N., 11755, 15467
 Tihara, R., 8154
 Tihenko, V. J., 10462
 Tikkanen, O., 15576
 Tikos, B., 8654
 Tilden, E. B., 11771
 Tillema, S., 2140
 Tiller, P. M., 5496
 Tillet, W. S., 4519
 Tilley, F. W., 11712
 Tilgren, J., 2664
 Tillson, A. H., 9661, 9662
 Timm, H., 4814
 Timme, A. R., 12025
 Timme, A. R., 11272
 Timmins, O., 4627
 Timofeeff-Resovsky, N. W., 205, 5305, 16206
 Tims, E. O., 1481
 Tinel, J., 5514
 Ting, P. C., 6886, 17907
 Ting, Y. C., 13074
 Tinker, M. A., 7626, 14699
 Tinsley, J., 8674
 Tipton, S. R., 473
 Tiralli, M., 3096
 Tischnendorf, W., 14489
 Tischler, W., 12580
 Tisdale, H. B., 1481
 Tisdale, W. B., 3168, 15890
 Tisdall, F. F., 2038, 2402
 Tiselius, A., 197, 1994
 Tiselius, A., 2582, 12658, 14440
 Tislowitz, R., 9922, 9380
 Tissier, M., 14591
 Tittelbaum, S., 9446
 Tittler, I. A., 3995
 Titus, H. W., 2503
 Tizzano, A., 5864
 Toiari, E., 5916
 Tobben, H., 411
 Tobey, J. A., 12789
 Tobias, N., 17377
 Tobiasen, E. S., 4249
 Tobie, J., 17895
 Tobie, J. E., 8708
 Tobin, C. E., 13049, 15025
 Tocantins, L. M., 7887
 Tod, H., 16397
 Todd, A. R., 6557, 9230
 Todd, E. W., 813
 Todd, 4520, 17150, 17208
 Todd, J. C., 17357
 Todd, T. W., 17187
 Todd, W. R., 1939, 3691
 Todd, W. T., 564
 Todhunter, E. N., 2079
 Todo, S., 4521
 Toenies, G., 1272
 Toenies, G., 16380
 Toenies, J. F., 16705
 Toenies, J. F., 8457
 Toffoli, C., 13427
 Togasaki, Y., 11144
 Tokaji, E., 16883
 Tokuya, T., 12767
 Tokuyama, S., 17585
 Tolaa, A. G., 17585
 Toledo Piza, S. de Jr., 3921
 Tolenaar, J., 9381
 Tolentino, P., 6317
 Tolowsky, S., 10695
 Tolksdorf, S., 16615
 Tolle, C. D., 14440
 Tollman, J. P., 11283
 Tolmach, J. A., 4522, 17211
 Tolman, B., 6477
 Tolman, L. M., 8893
 Tolstead, W. L., 2908
 Tomaszewski, W., 10378
 Tomcik, J., 919, 2583
 Tomhave, A. E., 798
 Tomimaga, K., 12768
 Tomita, C., 16814, 16815
 Tomkins, E. G., 10232
 Tomlinson, T. H. Jr., 7898
 Tommasi, G., 1278
 Tomokitsu, Y., 4630
 Tompkins, C. A., 2671
 Tompkins, C. M., 1482
 Tompkins, C. M., 4980, 4981, 6659
 Tompkins, C. M., 8603, 8616, 14051
 Tompkins, L. J., 13852
 Tondury, G., 8039
 Tongiorgi, E., 17510
 Tonini, G., 6555
 Tonks, E. L., 7820
 Tonnoir, A. L., 6907, 12494
 Tonzig, S., 12093
 Toole, E., 12017
 Toole, E. H., 8467
 Toole, E. H., 10193, 11957
 Toole, E. H., 13999, 15586
 Toole, E. R., 12153
 Toole, V. K., 11957
 Toomey, J. A., 920
 Toomey, J. A., 6106, 15163, 17278
 Top, P. H., 13503
 Topacio, D., 1210
 Topper, A., 14871
 Topping, N. H., 7894
 Torda, C., 18003
 Toret, G., 15580
 Torihata, K., 4523
 Torikata, R., 4524
 Torke, V., 9047
 Torne, H. v., 16102
 Toro, R. A., 13738
 Torok, G., 1898
 Torok, G., 14974
 Torpin, R., 11098, 17209
 Torrance, C. C., 16832, 16937
 Torre, M., 11447
 Torres, J. P., 85
 Torres, J. P., 11994, 17688
 Torrey, R. H., 4647, 4746
 Torstensson, G., 6490
 Tortone, J., 13193
 Toth, D., 4112, 16772
 Toth, L. A., 7412
 Toth, L. A., 7719, 11098, 12643
 Toth, S. J., 1221, 4864
 Tottler, J. R., 5537
 Tötterman, G., 2835
 Tötterman, G., 2399, 14938
 Totttingham, W. E., 17732
 Tournade, A., 14858, 15009
 Tournay, A., 14737
 Toussaint, E., 18961
 Touw, J. F., 3923, 4255
 Toverud, K. U., 9431
 Toivo, S., 13630
 Towne, L. E., 9404
 Townes, H. K. Jr., 1634, 3435
 Townsend, C. H. T., 1524
 Townsend, C. T., 13677
 Townsend, C. T., 9451
 Townsend, J. F., 15896
 Townsend, S. R., 636
 Townsend, S. R., 11331, 14514
 Toyama, R., 1095
 Toyama, R., 6378, 11845
 Toyama, T., 8154
 Trabacchi, G. C., 16874
 Trabucco, A., 737, 14969
 Tracy, P. H., 2720
 Tracy, P. H., 8079, 13681, 17092
 Tracy, R. L., 2777
 Traeger, C., 9938
 Trägårdh, I., 1512, 3199
 Trager, W., 5065
 Trahms, O. K., 9913, 11623
 Trancu-Rainer, M., 12581
 Tran-Phucan, S., 11071, 11072
 Tran-Phucan, S., 1176
 Trappnell, C. G., 9084
 Trapp, E., 3489
 Trappmann, W., 10378
 Trask, J. D., 18582
 Traub, E., 13584, 17377
 Traub, E., 6170
 Traub, E. F., 11624, 1712
 Traub, E. F., 4522, 17211
 Travassos, F. L., 12400
 Travassos, J., 13583, 17288
 Travis, L., 16414
 Travis, B. V., 3541
 Travis, B. V., 6773, 12273
 Travis, R. C., 5682
 Treadwell, A. L., 6816, 17966
 Treadwell, C. R., 14541
 Trefouël, H. P., 848
 Trefouël, J., 18142
 Treiger, I., 4085
 Trelease, H. M., 2865
 Trelease, H. M., 17734
 Trelease, S. F., 12060, 17734
 Trelease, W., 2828A
 Treloar, A. E., 14879
 Treman, A. R., 9854
 Trendelenburg, W. J. P., 3996
 Trenner, N. R., 5556
 Treon, J., 7923, 9669
 Tresschow, C., 6686
 Tressler, C. J. Jr., 1848
 Tressler, D. K., 1032, 2730
 Tressler, W. L., 17973
 Tretlow, E. L., 3569
 Tretlow, E. L., 9103, 14359
 Trevan, J. W., 17268
 Trevorrow, V., 7388
 Trevas, E., 12425
 Triab, E., 12679
 Tribuley, G. P., 17233
 Triebold, H. O., 15400
 Triendi, E., 9571
 Trier, E., 7807
 Trier, M., 10881, 11193
 Trikojus, V. M., 8859
 Trim, A. R., 9338, 14646
 Trimble, H. C., 2102
 Trimby, R., 12643
 Trinchieri, G., 17544
 Tripp, F., 6569, 11510
 Trister, S. M., 9374
 Trochain, J., 2886
 Troland, C. E., 1995
 Trombetta, V. V., 17703
 Tronco, G., 8545
 Trossarelli, L., 2686
 Troth, M. S., 8985
 Trotter, A. R., 13914
 Trotter, H., 10273, 13962
 Trotter, M., 15058
 Troup, A. G., 8810
 Troup, R. S., 13963
 Trout, G. M., 13879
 Trouvelot, B., 8179
 Truwell, O. A., 12832
 Truxav, F. L., 11039
 True, R. H., 5275
 True, R. H., 6524, 6525
 True, R. P., 12129
 Truhlar, J., 3564
 Trukhacheva, K. P., 10721
 Trukhmanov, B. G., 921
 Truog, E., 1177, 15535
 Trurnit, H. J., 464
 Trusler, H. M., 4525
 Truszkowski, R., 5490
 Truszkowski, R., 7389, 14647
 Tryon, R. M. Jr., 1110, 1161

- Tsai, C. 12650
12790, 13027, 17033
Tsang, Y.-C. 4335
Tsao, C.-L. 9901
Tschermak, L. 1307
1308, 10274
Tschermak-Seysenegg,
A. 3609, 9471
Tscherne, E. 2170
Tschopp, E. 5641
Tseng, C. K. 6334
Tseng, H. P. 5309
Tsubaki, S. 8154, 13587
Tsuchimura, S. 8154
Tsuchiya, H. 8712, 13497
Tsurumi, S. 15252
Tsutsumopulos, G. 2171
Tu, T.-J. 8738, 12302
Tucker, C. B. 17383
Tucker, C. M. 1482
3169, 8603
Tucker, H. B. 3700
Tucker, J. R. 4621, 4622
Tuckey, S. L. 1041, 17092
Tudhope, G. R. 9593
Tuerkischer, E. 9197
Tuft, P. 17115
Tuft, L. 1254, 6107
6108, 11653, 15147
Tui, C. 13504, 15267
Tukey, H. B. 3005, 15525
Tulane, V. J. 15034
Tulasne, R. 6109
Tulbmann, D. G. 890
Tul'Chinskii, M. N. 10061
Tullis, I. F. Jr. 7562
Tulloch, C. W. 11260
Tully, R. H. 3rd. 16531, 16533
T'Ung, T. 2591, 2687
8988, 13505, 14168
Tunison, A. V. 16466
Tunnell, E. A. 6241
Tunnell, R. 6154
Tupenevitch, S. M. 15881
Tupikova, N. 2021, 4014
Tuppa, K. 8030, 9753
Turk, L. M. 11787
Turnage, W. V. 3490, 9898
Turnbull, J. M. 1688, 2917
Turner, C. D. 3924
5901, 13305, 16989
Turner, C. E. 10028
Turner, C. W. 2124, 3826
7376, 7404, 9335
12959, 14507, 14607
14630, 14648, 14684
Turner, D. M. 1274
Turner, F. C. 16885
Turner, H. H. 652, 14979
Turner, J. P. 16954A
Turner, J. S. 16269
Turner, K. B. 1998
Turner, L. M. 1309
Turner, T. B. 11684, 15340
Turpitt, W. G. 15102
Turrentine, J. W. 15336
Turull, W. B. 2821, 9035
10119, 10139, 10140
10141, 10142, 10143
Tussing, E. B. 1211
Tuthill, L. D. 1631
Tuttle, L. W. 11332, 16321
Tuzet, O. 6776
Tweedie, A. S. 2497
Tweedy, W. R. 11024
Twichell, A. R. 5253
Twinn, C. R. 10387
10421, 15930
Twiss, J. R. 15191
Twisselmann, N. M. 5885, 6223
Twitty, V. C. 11374, 13337
Twombly, G. H. 7857
Twomey, L. 7456
Twort, J. M. 16886
Tydemann, H. M. 6526
Tyler, A. 12659
Tyler, D. B. 12815
Tyler, J. 17774
Tyler, L. J. 15468, 15811
Tyler, M. W. 7573
Tyler, W. M. 12437
Tyner, E. H. 15573
Tyner, L. E. 8623
Tysdal, H. M. 6491, 13840
Tyson, R. W. 4256
Tyszkiewicz, S. 8546
Tyukody, F. V. 4138
Tyzzar, E. E. 1018
U
Uber, F. M. 8933
Ubisch, G. V. 4513
Ubisch, L. V. 9795
Uchino, T. 13506
Ucko, H. 3652
Udagawa, I. 16103
Uday, E. C. 12197
Udvarhazi, J. 10706
Ueda, M. 13565, 13587
Uemura, H. 4159
Uenaka, S. 940, 941
Ueno, S. 8156
Uggeri, B. 9715, 14688
Ugo, A. 610, 2589
Ugrenovic, A. 1310
Uher, R. V. 9620
Uhl, A. H. 1345
Uhl, E. 2604
Uhlenhuth, P. 922
Uhlenhuth, P. 13248
Uhrer, F. M. 9070
Uhlmann, F. 9572
Uhry, 2229
Uittien, H. 1687, 11873
Ulbrich, E. 11829, 11830
Ulke, T. 4727, 4775
Ullard, E. U. 13380
Ullstrup, A. J. 14049, 17806
Ulliot, P. 12616
Ulrich, R. 12079
Ultee, A. J. 3015
Umbgrove, J. H. F. 14203
Umbreit, W. W. 4703
8353, 12152, 17440
Umeno, S. 6322
Umeya, Y. 8154, 13668
Underhill, G. W. 1492
Underhill, S. W. F. 11003
Underkoffler, L. A. 15738
Underwood, E. J. 9173, 15383, 15389
Underwood, P. C. 5095, 17279
Ungar, A. 16438
Ungar, G. 5514, 16438
Ungerleider, H. E. 4097
Ungo-Mugdan, A. 6758
Ungureanu, D. 14581
Ungureanu, E. 8662
Uñaiski, H. 16351
Unna, K. 4904
5566, 8558, 12643
Untersteiner, L. 16816
Uotila, U. U. 11416
12995, 16635
Upcott, M. 1709, 16190
Upham, R. 3767
Upp, C. W. 11744
Uppal, B. N. 4972
Uppal, H. L. 1222, 6500
Upshall, W. H. 11995
Urbain, A. 6253
Urbani, L. 14548
Urbanyi, L. 14548
Urey, H. C. 7069
Uroukoff, B. 10445
Ury, B. 5699, 14738
Usher, G. S. 15288
Usilton, L. J. 15342
Usinger, R. L. 6913
Uspenskaya, G. S. 5791
Ussher, N. T. 4062
Ussing, H. H. 7221
Ustreicher, A. 17729
Uthmüller, W. 8824, 10636
Utterback, C. L. 16246
Utley, K. H. 6219
Utzino, S. 13713
Uvarov, B. P. 3365
Uyen, M. J. v. 16225
Uyl, D. D. 13964
Uyldert, I. E. 3925
9333, 9382, 11063
V
Vacareanu, N. 5749
Vaccari, E. 2796
Vaccaro, H. 11756
Vachet, F. du. 15681
Vacherat, R. 1525
Vachon, M. 6865
Vagi, I. 12015
Vago, G. 15031
Vachulich, J. A. 13178
Vaidya, N. G. 1275, 1277
Vaile, J. E. 2006, 17626
Vaillant, C. 4266
Vaillant, E. 13381
Vaisman, A. 6142
9929, 17262
Valaer, P. J. 13178, 14993
Valaoras, V. G. 6144
Valasco Montes, F. 14934
Valdiguie, P. 3647, 13548
Valensin, M. 2755
Valentin, H. 12051
Valentine, F. C. 15164
Valerio, A. 17212
Valletto, G. 1430, 2688
Valkanov, A. 6774
Vallados, R. H. 17166
Valle, J. R. 16622, 16623
Valleau, W. D. 6476
15791, 15833
15889, 17807
Vallentin, A. 12484
Valley, G. 8242
Vályi-Nagy, T. 7773
Vammen, B. 11540
Vamos, L. 843
Van Artsdalen, M. 10693
Van Beneden, A. 7031
Van Breda, N. G. 9030
Van Buchem, F. S. P. 3653
Vance, A. M. 10418
Vancea, P. 12975
13067, 16488
Van Cleave, H. J. 10550
Van Cleve, R. 3392
Vandenberg, S. R. 15832
Vanderlinden, L. 13841
Van Dersal, W. R. 4760
Van der Schalle, H. 8743, 8744, 8745
Vanderveer, A. 15147
Van Der Veer, J. B. 480, 9533
Vanderwaeren, J. 6463
6464, 6465, 15754
Van Deventer, W. C. 5377A
Van Dongen, K. 14860
Van Doren, A. 11987
Van Dusen, C. R. 17034
Van Duzee, E. P. 18010, 18014
Van Dyke, E. C. 6887
8777, 18011
Van Dyke, H. B. 5449, 12643
Vane, R. J. 13280
Van Eck, W. F. 13198
Vanef, A. 14678
Van Harreveld, A. 3997
5700, 8063
8064, 11145
Van Heuverswyn, J. 12996, 12997
Van Horn, C. W. 15615
Van Huysen, G. 2450
Van Landingham, A. H. 9812
Van Liere, E. J. 12643, 12907
Van Luijk, A. 4997
Vanni, V. 1006, 1571, 1572
Van Nieuwenhuizen, C. L. 7732
Vannotti, A. 10940
Van Oosten, J. 9061, 14423
Van Overbeek, J. 3066
Van Prohaska, J. 13252
Van Rensburg, S. W. J. 6155
Van Rossem, A. J. 1649
1650, 1651
1652, 14306
Vanselow, K. 3034
Van Slyke, C. J. 15204
Van Slyke, D. D. 10914
16341, 16342
Van Someren, V. D. 8713
Van Steenburgh, W. E. 10456
Van Steenis, C. G. G. J. 11898
Vanstone, E. 17639
Vanterpool, T. C. 1484
Van Thiel, P. H. 15924
Van Volkenberg, H. L. 17919
Van Wagenen, W. P. 9454
Van Wicklen, F. C. 8592
Van Winkle, C. C. 7859
Van Wyk, J. H. 1688
Varadaraja Iyengar, A. V. 4982
Vardon, A. C. 2629
Varela, M. E. 7936
Varela-Fuentes, B. 5840
Varga, T. 9893
Vargas, L. Jr. 12970
14886, 14892, 16865
Vargo, T. 9832
Varossieau, W. W. 4908
Vars, H. M. 9255, 12643
Vartiainen, I. 5792
Vass, A. F. 4851
Vasudeva, R. S. 17824
Vau, E. 711, 4314
Vaughan, J. M. 7888, 14935
Vaughan, W. T. 2585, 17157
Vayson, de Pradene, A. 726
Vaz, Z. 1566, 3203
Veal, J. R. 11205
Veatch, J. O. 11971
Vecchio, G. del. 8664
Veen, A. G. v. 271
1677, 3052, 14519
Veen, R. 9608
Veen, R. van der. 4986
Veenendaal, H. 15390
Veeraraghavan, N. 2630
Véghelyi, P. V. 17920
Veibel, S. 8365
Veillet, A. 1860
9329, 9330
Veintemillas, F. 11565
Vejnar, J. 3586
Velds, M. 9940
Velick, S. F. 5538
Vellard, J. 4160
Velu, H. 6110, 18530
Venable, J. H. 13050
Venables, L. S. V. 163
Venard, O. E. 14212
Vendramini, R. 13656
Venezia, M. 1235
Vengrenovskii, S. 13843
Venhuis, W. G. 3339
Venkatachalam, K. 15693
Venkata Rao, M. G. 10275
Vennesland, B. 14807
Venning, E. H. 2151
Ventre, J. 11772
Verard, G. 16986
Verbunt, J. A. 4633
Vercellone, A. 5637, 5638
Verdolini, G. 2587, 8159
Verdon-Roe, C. M. 265
Verge, J. 2605
Verhaar, W. J. C. 11401
Verhoef, L. 2904, 3023
Verhoeff, F. H. 2385
Verhoeff, K. v. 8748
Verhoeff, K. W. 6829, 6830
6831, 6832, 8749
8761, 10575, 12319
16012, 16013, 16014
Verkade, P. E. 16612
Verleger, R. 16382
Vermehren, E. 14689
14872, 16439
Vermes, E. 11818
Vermeulen, C. 3750, 12643
Vermilye, H. N. 17289
Verna, J. 7280, 12822
Verner, L. 3007
Verne-Soubiran, A. 12822
Verney, E. B. 503
Verona, O. 1033
4637, 4638, 11801
12130, 14087, 15469
Verrier, M. L. 16038
Verrill, A. H. 8885, 10686
Verstraete, A. 12680
Vertue, H. St. H. 16317
Verwoerd, L. 1688
Verzar, F. 2101, 12813
Vesa, A. 2400
Vesselovsky, O. 2339, 5794
Vestal, C. M. 4408
Vestal, P. A. 12475
Vestergaard, V. 8746
Vestergren, G. 10631
Vetulani, T. 11490
Vevers, H. G. 168
169, 3484
Veyron, 14838
Veyron, J. 13170
Vezani, V. 779
Viado, J. 1311, 8548
Vial, J. 13160, 14721
Vialli, M. 2113, 9573
Viaud, G. 2192, 2193
Vicens, C. A. 9277
Vicentis, A. de. 2588
Vickery, H. B. 14020
14022, 15768
Vickery, J. W. 3502
12586, 16149
Victor, J. 9524
Victoria, M. 2408, 7918
Vidacovich, M. 5608, 12927
Vidal, C. B. 2525
Vidal, J. 6459
Vidos, A. 3914
Viehmann, H. 15780
Vishoever, A. 4161, 4162, 4163
4164, 14861, 17670
Vieregge, P. D. 14605
Vierthaler, R. W. 10029
11608, 15341
Viets, K. 3313
10582, 10583
Vieweg, G. 2386
Vigé, L. 12376
Vigneaud, V. du. 5764
7770, 9189
9506, 14485
Vignec, A. J. 13582, 13584
Vigness, I. 10941
Vignoli, L. 13167
Vignolo-Lutati, F. 13762
Vigodsky-De Philippis, A. 11899, 13738
Vike, L. 14409
Vike, L. E. 7235
Villard, O. 13507
Villain, Mme. 11584
Villar, E. H. del. 7219
Villaret, B. 14391
Villaret, M. 14515
Villegas, V. 6003
17079, 17080
Villola, G. G. 9626
9627, 9941, 16440
Villiers, A. 8778
Vilter, R. W. 4265, 5841
Vilter, S. P. 3953
4265, 5841
Vilter, V. 5652
Vincent, D. 13186, 14666
Vincent, F. 7084
Vincent, G. 10276, 13965
Vincke, E. 4165
Vinogradov, B. 12442
Vinson, C. G. 3169
3214, 15783, 15834
Virdis, F. 6323
Viridien, P. 2714
Virtanen, A. I. 13689, 15409
Virtue, R. W. 5539, 10976
Visher, S. S. 8990
Vishnevsky, A. A. Jr. 4166
Vismans, J. B. M. 16916
Visocchi, V. 4635
Visscher, M. B. 3659
3761, 4079, 5591
5728, 7714, 7720
7721, 11036, 12643

Visser, W. C., 14088
 Vivaldi, L., 1687A
 Vizcarondo, R., 8511
 Vlasco, R., 5602, 18187
 Vlăduțiu, O., 11071, 11072
 Vles, F., 610, 2589
 Vlk, W., 1586
 Voëgtlin, C., 611
 Voelken, W., 12019
 Vogel, F., 1034
 Vogelsang, G. M. D., 5576
 Vogelsang, T. M., 1997
 Voges, H., 7806
 Vogler, G., 6278
 Vogt, E., 4071
 Vogt, M., 503
 Voiculescu, T., 13616
 Voigt, R., 9574
 Voigt, R. F., 4909
 Vokes, H. E., 6828, 10556
 Volini, I. F., 17218
 Volk, J. J., 3270
 Volk, N. J., 10212, 13863
 Volk, V. K., 13508
 Volkensohn, D. V., 2073, 3733
 Volkova, N. F., 15777
 Vollmer, H., 4168
 Volpitt, P. P., 18192
 Voltterra, V., 10750
 Voltterra d'Ancona, L., 14402
 Von Bonin, G., 2464, 11402
 Vonderahe, A. R., 16951
 Vonderlehr, R. A., 15342
 Von Haam, E., 16894
 Von Richter, V., 14441
 Voorhees, R. K., 1481
 Voorhoeve, H. C., 2665
 Voorst, F. T. v., 8387
 Voris, R., 17998
 Vornatscher, J., 12617
 Vornatman, A., 15067
 Voss, E. A., 4526
 Voss, H. E., 14649
 Voss, J., 13844
 Voss, W., 13789
 14031, 14032, 17744
 Vosskühler, P., 14551
 Vovk, A. M., 17791
 Vreeland, J., 1939
 Vries, N. F. de, 4642
 Vrija, J., 9894
 Vryonis, G., 17921
 Vryonis, G. P., 15285
 Vucetich, M., 7941

W

Wahn, H., 10006
 Wainwright, C. W., 612
 Wainwright, W. W., 7525
 Waisman, H. A., 3730
 Wajzer, J., 7481, 16529
 Waitz, R., 11333
 Wajzer, J., 474, 12914
 Wakabayashi, Y., 12681, 12682
 Wakeland, O., 12186
 Wakelin, R. W., 7449
 Wakeman, A. J., 15768
 Wakeman, F. B., 17215
 Wakerlin, G. E., 7733
 11206, 12643
 Wakim, K. G., 4081, 16749
 Waksman, S. A., 4696
 4703, 6294
 6502, 8350
 Walas, J., 6438
 Walawski, J., 11207
 Walburn, L. E., 15268
 Walch-Sorgrager, B., 923, 8208
 Walcott, A., 16378
 Wald, G., 444
 12643, 13060
 Waldbott, G. L., 6111, 13509
 Waldenström, J., 649
 Waldhecker, M., 2778
 Waldo, G., 11006
 Wales, J. H., 5409, 6254
 Wales, T. W., 2304
 Waletzky, E., 1783
 Walford, E. J. M., 12097
 Walford, L. A., 5410
 Walkden, H. H., 15908
 Walker, A. E., 685
 686, 15018
 Walker, A. M., 16636, 16656
 Walker, E., 17255
 Walker, E. H., 15510
 Walker, E. L., 16676
 Walker, G. P., 17601
 Walker, H. B., 1276, 13906
 Walker, H. G., 6700
 12181, 12204
 17878, 17879
 Walker, J. C., 1452, 10174
 12156, 14077, 15535
 15877, 17794, 17825
 Walker, P. A., 738
 Walker, R., 11846
 Walker, R. L., 1712
 Walker, S. J., 15617
 Walker, T. K., 11766
 Walker, W. F., 13657
 Walkinshaw, L. H., 7032
 Walkom, H. C., 13986
 Wall, H., 16750
 Wall, M. E., 4915, 15702
 Wall, M. J., 4511, 13485
 Wallace, E. R., 5010
 Wallace, E. W., 4144, 13178
 Wallace, F. G., 6802
 Wallace, G. B., 7391
 7809, 13178
 Wallace, G. J., 8852
 Wallace, H. A., 62, 5304
 Wallace, J. M., 1482
 15864, 17795
 Wallace, T., 1277
 3008, 17808
 Wallace, W. McL., 3630
 Wallace, W. R. J., 14903
 Wallach, A., 12062
 Wallart, J., 637
 Wallbach, G., 222, 4257
 Wallgren, A., 2428
 Wallich, R., 13041
 Wallihan, E. F., 12600
 Wallis, A. T., 14307
 Wallis, G. O., 780, 17086
 Wallis, T. E., 8564
 Wallis, W. D., 727
 Wallman, L., 14636
 Wallman-Carlsson, C., 4252
 Walmo, U., 8549, 8550
 Walls, E. W., 17045
 Walls, G. L., 2425, 8006
 Walmsley, R., 675
 Walsh, A. I., 1980
 Walsh, F. B., 7643
 Walsman, S. A., 12061
 Walter, E., 10511

Walter, E. V., 3354, 10578
 Walter, F., 6156, 7465
 Walter, J. M., 3169, 12131
 Walter, L. A., 16818, 17250
 Walter, R. I., 2125, 9366
 Walter, W. G., 7526
 Walther, B., 11227
 Walther, E., 2887, 15264
 Walther, G., 12915
 Walther, H. E., 11301
 Waltman, O. S., 4880, 14027
 Walton, A., 10740
 Walton, C., 12643
 Walton, C. L., 1472
 Walton, E. P., 13173
 Walton, R. R., 10457
 Walzer, M., 924, 2098
 8160, 8161, 15129
 Walz, E. M., 7636, 12643
 Wampler, E. L., 10471
 Wander, W., 13855
 Wang, C. C., 3800
 Wang, C. F., 9162
 Wang, C. H., 9162
 Wang, C. W., 2665
 11609, 13010
 Wang, C. Y., 9138
 Wang, K. J., 3800
 7669, 11077
 Wang, S. C., 2336
 5663, 7655, 16599
 Wangenstein, O. H., 31100
 Wanner, A., 6255
 Wanschler, J. H., 8910
 Wanselow, K., 8547
 Waraich, G. S., 9155
 Warburg, E., 16751
 Warburg, O., 3565
 Warcollier, G., 1278
 Ward, A. H., 4413
 Ward, E. D., 15700
 Ward, F. K., 1673
 Ward, G. E., 11773
 Ward, H., 8234
 Ward, H. B., 10629
 Ward, H. K., 8243
 Ward, R. E., 9811A
 Ward, S. M., 2567, 11556
 Wardlaw, C. W., 3009
 6603, 13915, 15892
 Wardwell, F. R., 12843
 Wareham, R. T., 15431
 Waring, J. J., 8963
 Warkany, J., 3873
 Warmke, H. E., 8926, 16191
 Warne, L. G. G., 8512
 Warner, E. D., 259
 3654, 7333
 7392, 12770
 Warner, W. P., 8176, 13510
 Warren, A. E., 10774, 13340
 Warren, C. O. Jr., 12643
 Warren, D. C., 11509
 13047, 13888, 16207
 Warren, E. R., 18107
 Warren, F. L., 7393, 14911
 Warren, J., 618, 6157
 Warren, L. H., 15935
 Warren, R., 12916, 16441
 Warren, S., 16325
 Warren, S. L., 4652
 5657, 16816, 16320
 Warren, W. D. M., 9037, 10277
 Warsberg, A. v., 11221
 Wasenius, E., 16101
 Washburn, K. V., 1279
 Washburn, L. E., 287, 16450
 Washburn, R. G., 6005
 6478, 8089
 Wasseen, M., 9970
 Wasser, C. H., 15559
 Wastl, H., 13178
 Watanabe, A., 15718
 Watanabe, I., 17819, 17320
 Watanabe, M., 9062, 17473
 Watanabe, T., 10851, 14936
 Watchorn, E., 5349
 Waterhouse, D. F., 3481

Waterhouse, G. A., 5144
 Waterman, A. J., 5962, 9774
 Waterman, A. M., 15890
 Waterman, F. A., 9705
 Waterman, L., 7532
 7776, 9382
 Waterman, N., 11302, 13233
 Waterman, S. A., 17988
 Waterman, T. H., 9041
 Waters, E. T., 800, 3686
 Waters, H. A., 10472, 10474
 Waters, N. F., 97
 Waters, P. C., 3237, 9820
 Waters, R. H., 2194
 Waters, R. M., 2331
 Waters, T. C., 14994
 Watkin, E. E., 3309
 10798, 12337
 Watkin, J. E., 4410
 Watkins, G. M., 4989
 Watkins, J. H., 15343
 Watkins, J. M., 17708
 Watkins, T. C., 17880
 Watkins, W. E., 9810
 Watkins, W. L., 2976
 Watson, A. F., 198
 Watson, C. J., 2152
 10941, 11334, 13028
 Watson, D. J., 8586
 Watson, D. M. S., 3523
 Watson, D. W., 6272, 11774
 Watson, F. E., 6936
 Watson, G. C., 15581
 Watson, H. M. S., 7400
 Watson, J. R., 3359
 9006, 12415
 Watson, R. B., 15700
 Watson, R. B., 6753
 Watson, R. B., 9344
 Watson, S. H., 15165
 Watt, A. S., 131, 16269
 Watt, J., 8294
 Watterott, A., 388
 Wattie, E., 8304
 Wattison, J. T., 3355
 Watts, B. M., 6004
 Watts, P. S., 8327
 Watts, V. M., 5564, 14000
 Watzlawik, E., 5359
 Wauer, H., 4315
 Waugh, D. F., 12643
 Waugh, J. G., 17711
 Waugh, J. R., 15344
 Wax, N. W., 428
 Wax, J. H., 14867
 Weakley, C. E. Jr., 9708, 9812
 Wean, R. E., 12160, 17849
 Wearn, J. T., 18260
 Weatherby, J. H., 554, 14862
 Weatherford, H. L., 3453, 4358, 13308
 Weatherwax, P., 10123
 Weaver, H. M., 7670
 Weaver, J. E., 7189
 9038, 12601
 12602, 12625
 Weaver, J. W., 11343
 Weaver, R. L., 18105
 Webb, B. H., 9817
 Webb, J. P. Jr., 17216
 Webb, T. J., 5556, 11261
 Webb, W. G., 5207
 Webber, H. J., 1280, 8489
 Webber, I. E., 7129
 Webber, J. M., 6492
 Weber, A. L., 13916, 14112
 Weber, E., 9754
 Weber, G., 11610
 Weber, G. F., 15812
 Weber, H., 8802, 12416
 15526, 17977, 18039
 Weber, J., 2058
 7495, 14606
 Weber, N. A., 14270, 16250
 Weber-Leipzig, E., 13319, 13320, 13321
 Webster, E. R., 17615
 Webster, L. T., 18511
 13585, 13659
 Webster, M. D., 6324
 Wechel, A. te., 17662
 Weck, 15682

Weckel, K. G., 8077
 8086, 13382, 13685
 Wedd, A. M., 7810, 11165
 Wedemann, E., 8366
 Wedemann, W., 9811
 Wedemeyer, H. E., 13234
 Weech, A. A., 1998, 1999
 Weedon, F. R., 11262
 Weedon, H. W., 321
 Weeks, D. M., 9524
 Weeks, W., 11995A
 Weeks, W. F., 12919
 Weel, P. B. v., 4359
 Weerd, W. de, 9621, 11317
 Weetman, L. M., 3143, 3169
 Wegelius, C., 2153
 Wégria, R., 4099
 4100, 12643
 Wégria, R. G. E., 12643
 Wehr, E. E., 3253
 14198, 17959
 17960, 17961
 Wei, H., 4603
 Wei, Y. L., 4581
 Weidenreich, F., 2465
 Weidinger, A., 5431
 Weidle, H., 5443
 Weidman, W. H., 17321
 Weidner-Rauth, E., 16192
 Weighmann, R., 12898
 Weigl, R., 13586
/>

- Weissfeiler, J. E., 628
 Weitz, J., 1131
 Weitz, M., 2337
 Weizmann, O., 4697
 Welch, A. S., 7058
 Welch, B. L., 1818
 16219, 16227, 16228
 Welch, C. S., 12643, 14800
 Welch, d'A., 8747
 Welch, D. S., 3169, 15889
 Welch, E. A., 4350
 Welch, E. V., 9007
 Welch, H., 4528, 6241
 Welch, J. E., 15618
 Welch, P. S., 1856, 3526
 Welcker, A., 925
 Weld, J. T., 17280
 Weldon, M. D., 6498, 9019
 Welke, H. F., 15303
 Welker, W. H., 2542
 Weliensiek, S. J., 16193
 Weller, T. H., 3393
 Wellhouse, W. H., 8879
 Wellisch, S., 5944
 18322, 18327
 Wellman, B., 441, 2216
 Wellman, F. L., 3169, 15858
 Wellmann, O., 14548
 Wells, A. H., 7999, 17359
 Wells, A. Q., 4626
 Wells, B. W., 14381
 Wells, C. W., 1007
 Wells, G. P., 3611
 Wells, J. A., 3827, 12643
 Wells, J. R., 4346
 Wells, P. A., 2725, 11773
 Welsh, J. H., 9452
 13004, 13005, 14650
 Welter, W. A., 3394, 5254
 Welton, D. G., 15346
 Welton, F. A., 14023
 Welty, J. W., 11208
 Wendel, W. B., 5515
 Wenderoth, H., 17723
 Wendt, G., 5845, 16924
 Wenger, L. J., 6103
 Wenger, W. J., 926
 Wenrich, D. H., 5105
 Wense, T., 7811, 9384
 Went, F. W., 6576, 6577
 10307, 14440, 15720
 15729, 17686, 17687
 Went, J. C., 4998
 14082, 14089
 Went, S., 9896
 Wensch, A., 17745
 Wenzel, J. S., 12643
 Wenzel, M., 10068
 Wenzel, R. L., 6888
 Wenzl, H., 17850
 Wepler, W., 4208
 Wepman, J. M., 12561
 Werch, S. C., 12643
 Werder, F. v., 12869
 Werdermann, E., 17541
 Werkman, C. H., 10057
 11760, 11768, 13712
 Werle, E., 4169
 5466, 9385
 Werle, P. P., 8017
 Wermer, P., 12998
 Werner, A. A., 5864
 Werner, A. E. A., 4576
 Werner, B., 14403
 Werner, C. F., 7931
 Werner, E., 12859
 Werner, F., 5516
 6976, 6986
 Werner, G., 10733, 11352
 Werner, H., 11442
 Werner, H. W., 13178, 13188
 Werner, M., 15181
 Werner, M. J., 12643
 Werner, R. A., 9048
 Werner, R. G., 12803
 Werner, S. C., 12999
 Werth, E., 3053, 8475
 Wertheimer, D., 927
 Wertheimer, E., 9197
 Wertz, A., 14640
 Wertz, R. v., 16382
 Wesel, R. v., 11611
 Wesenberg-Lund, E., 6817
 Wesselhoft, C., 629, 11713
 Wessels, P. H., 10372
 Wessler, H., 16892
 Wessler, S., 19714
 Wesson, L. G. Jr., 18031
 West, O., 1446, 10223, 10325
 10376, 17716, 17718
 West, E., 3257
 West, E. M., 6439
 West, E. S., 1939, 3010
 West, F., 3691, 5909, 12739
 West, J., 12169
 West, O., 132
 West, P. M., 2742
 6295, 8351
 West, R., 3746
 West, T. E., 7067
 Westblad, E., 1602
 Westcott, F. H., 6115
 Westenhofer, O., 11247
 Wester, R. E., 15619
 Westerdijk, J., 1081
 Westerdijk, W. W., 3927, 3928
 Westergaard, M., 5321
 Westerland, E., 16938
 Westman, A., 3929
 9931, 4294
 Westman, J. R., 3395
 Weston, J. K., 11382, 16959
 Westphal, U., 12936
 Westphal, R. B., 2139
 Wetmore, R. H., 6423, 17527
 Wetterer, E., 223, 13107
 Wettstein, A., 9347, 9386
 Wettstein, O. v., 6987
 6988, 10637
 Wettstein, W. v., 1758, 3035
 Wetzel, R., 5096, 9756
 Weurman, C., 6596
 Weyer, E. G., 718
 Weyer, F., 6908, 14143
 Weyrauch, F., 11714
 Wezel, H., 928
 Wezler, K., 9575, 13135
 Wharton, G. W., 5111
 Wharton, M. F., 13917
 Whedon, W. F., 14397
 Wheeler, C. M., 4669
 Wheeler, E. J., 8371, 8476
 Wheeler, G. C., 6930
 Wheeler, H. E., 5162
 Wheeler, K. M., 15168
 15170, 15171
 Wheeler, L. C., 2888
 6395, 12468
 Wheeler, N. C., 5106, 17948
 Wheeler, N. H., 18021
 Wheeler, P. A., 13642
 Wheeler, W. M., 8869
 Wheeler-Hill, E., 929
 Wheelis, J. M. Jr., 8311
 Whelan, D. B., 17852
 Whelan, L. A., 13373, 15582
 Whiffen, A. J., 1082
 Whipple, G. H., 4247, 7889, 9155
 9267, 10991, 13264
 Whitaker, D. M., 8078, 3098
 Whitaker, H. L., 10827
 Whitaker, J. R., 12635
 Whitaker, T. W., 1482
 5265, 5294
 Whitaker, W. M., 15345
 Whitbeck, C. G., 3798, 3799
 4577
 Whitby, L., 6145, 17281
 Whitby, L. E. H., 1145, 3675
 White, A., 3681, 5542, 11070
 White, A. H., 1042
 White, B. E., 17999
 White, B. V., 2281
 White, C., 8234, 8243
 White, D. P., 10352
 White, E. C., 7154
 White, E. G., 14586, 16996
 White, E. I., 16053
 White, F. E., 14651
 White, H. C., 158
 170, 10652, 12632
 White, H. J., 2667, 13178
 White, H. L., 1475
 8575, 11094
 12643, 14980
 White, J., 3681
 5538, 14651
 White, J. W., 15564, 15571
 White, P. D., 4068, 4098
 4322, 5712, 11169
 11204, 13109, 14776
 White, P. R., 6593, 17723
 White, R., 10307
 Whitehead, F. E., 3171
 Whitehead, H. G., 13631
 Whitehead, R. W., 13178
 Whiteside, W. H., 4670
 White-Stevens, R. H., 1281
 Whitfield, C. J., 10791
 Whiting, A. R., 3468
 Whiting, P. W., 1784
 Whitley, G. P., 6973
 6974, 12428
 Whitlock, B. W., 15890
 Whitlock, F. L., 18082
 Whitlock, J. H., 10512
 15974, 15975
 Whitlock, S. C., 5886, 15976
 Whitman, L., 6220, 13581
 Whitman, W., 12604
 Whitnah, C. H., 2480, 6011
 Whitney, J. B. Jr., 15481
 Whitney, L. D., 15490
 Whitney, L. F., 12551
 Whitney, L. V., 7233
 7234, 8991
 Whitney, R., 5651
 Whitney, R. J., 3527
 Whittell, H. M., 10653
 Whittemore, W. L., 15216
 Whittington, F. B., 12208
 Whyte, D. W., 5611, 9282
 Whyte, E. F., 11687
 Whyte, R. O., 5370, 6498
 Wiant, J. S., 3167
 15813, 15889, 15890
 Wick, A. N., 9247
 12643, 12972
 Wickens, D. D., 5688
 Wickliff, E. L., 159
 Widdowson, E. M., 265
 308, 7568
 10993, 16442
 Widdowson, T. W., 15039
 Widenbauer, F., 12732
 Widström, G., 9881
 Wiczorek, K., 17550
 Wiczorowski, E., 7510, 12643
 Wiedemann, 3036
 Wieders, S., 15269
 Wiegand, C. W., 2779
 Wieland, H., 13678
 Wieler, A., 1410
 Wiemann, R., 9049
 Wien, R., 14784
 14863, 14864
 Wiener, A. S., 9897
 Wieninger, E., 7674
 12713, 14493, 16706
 Wiens, A., 13672
 Wiercinski, F. J., 7627
 Wieringa, K. T., 16314
 Wiersma, C. A. G., 466
 2249, 5702, 7697
 Wierzuchowski, M., 14538, 14539
 14754, 14781
 Wiesbrock, H., 14995
 Wiese, A. C., 1941, 3567
 Wieslander, A. E., 17542
 Wiesser, E. G., 15234
 Wieting, J. O. G., 10473
 Wiggans, C. C., 15620
 Wiggans, R. G., 10203
 Wigger, C. J., 504
 Wigger, H., 11421
 Wiggers, C. J., 4099, 9536
 Wiggins, I. L., 3517
 Wigglesworth, V. B., 3655, 5137
 Wight, H. M., 10828
 Wightman, H. B., 6116
 Wightman, J. C., 5230
 Wigodsky, H. S., 382
 11335, 12643
 Wiinstedt, K., 3518
 Wilbar, C. L. Jr., 13194
 Wilber, G. H., 8364
 Wilbrandt, W., 3551
 3552, 3553
 Wilbur, D. A., 17978
 Wilbur, D. L., 11350
 11349, 11350
 Wilbur, K. M., 7257
 Wileke, H. L., 11514
 11741, 11742, 15112
 Wilcocks, C., 11715
 Wilcox, A. N., 3542
 Wilcox, H. B. Jr., 7702
 Wilcox, M. S., 6634
 Wilcoxon, F., 1501
 3169, 13990
 15882, 17887
 Wilde, H., 11491
 Wilde, H. de, 13395, 13598
 Wilde, S. A., 4901, 10352
 Wilde, W. S., 7258, 9085
 Wilder, J., 7133
 Wilder, O. H. M., 11505
 Wilder, R. M., 587, 5854
 587, 9218
 Wildermuth, R., 6503, 15583
 Wilding, J. L., 5411
 Wildman, A. B., 7579
 Wildon, C. E., 6522
 Wilds, A. L., 12931
 Wile, U. J., 15346
 Wilens, G., 9713
 Wilgus, H. S. Jr., 14552
 Wilhelm, A., 8261, 8262
 Wilhelm, L. A., 4428
 Wilhelm, C. M., 2114
 Wilhelm, E. W., 14762
 Wilhelm, O., 5205
 Wilkerson, V. A., 15034
 Wilkins, L., 560
 Wilkins, R. W., 9135
 9515, 9638
 Wilkins, S. D., 2514
 Wilkins, W. H., 5389
 Wilkins, W. L., 486
 Wilkinson, D. S., 10458, 14271
 Wilkinson, G. J., 10278
 Wilkinson, H., 16538
 Wilkinson, J. F., 4261, 7379
 Wilkinson, J. T., 16285
 Willard, C. J., 1212
 Willett, G., 5207, 7038
 Williams, C. F., 17641
 Williams, C. H., 6325
 Williams, C. L., 4170
 Williams, C. S., 5230
 Williams, E., 7927
 Williams, E. O. Jr., 61
 Williams, G. D., 6221
 Williams, G. Z., 14862
 Williams, H. H., 1963
 7330, 14494
 Williams, J. C., 15274
 Williams, J. F., 16292
 Williams, J. G., 8328
 Williams, J. K., 15127
 Williams, J. L., 12401
 Williams, J. R. Jr., 4069, 4100, 9535
 Williams, J. W., 11673
 Williams, K. T., 2925
 Williams, L. F., 8242, 17393
 Williams, L. H., 13029
 Williams, L. O., 2842
 Williams, O. O., 10513, 17213
 Williams, P. C., 10870
 7377, 16625
 Williams, P. H., 1453
 Williams, R. D., 9126
 Williams, R. F., 4944, 15733
 Williams, R. G., 7972, 11417
 Williams, R. J., 1377
 13296, 14019, 17722
 Williams, R. R., 7069, 14564
 Williams, S., 4627, 17543
 Williams, S. R., 8734
 Williams, T., 183
 Williams, W. L., 6256, 12997
 Williamson, J. E., 3808
 Willier, B. H., 759
 Willigen, A. H. A. de, 16612
 Willis, E. B., 8872
 Willis, E. R., 13345
 Willis, H. E., 14122
 Willis, H. S., 18512, 13632
 Willis, H. W., 6201
 Willis, L. G., 1354, 13980
 Willis, R. A., 7858, 14908
 Willison, G. W., 5842
 Willison, R. S., 10353
 Willis, C. O., 1348
 Willis, F. A., 475
 5714, 14757
 Willmann, C., 12341
 Willmer, E. N., 12882
 Willis, L., 7878
 Willson, D. M., 3674
 Willson-Pepper, J. K., 16637
 Wilmes, H., 4686
 Wilmska, A., 14752
 Wilson, A., 3011
 Wilson, A. L., 3012
 Wilson, B. D., 17603
 Wilson, C. B., 3810
 Wilson, C. L., 11931
 Wilson, C. V., 2491
 Wilson, D. B., 6759
 Wilson, D. P., 12429
 Wilson, D. W., 4046
 11056, 16608
 Wilson, E., 17114
 Wilson, E. B., 8312
 Wilson, E. E., 14055
 Wilson, E. H., 14056, 17845
 Wilson, F. H., 3612
 8243, 9453
 Wilson, G. F., 17881
 Wilson, G. S., 2733, 8189
 Wilson, H., 399
 4628, 4629, 6202
 Wilson, H. E. C., 5535, 5567
 Wilson, H. F., 15535
 Wilson, H. K., 8880
 Wilson, I. C., 11716
 Wilson, J. A., 12460
 Wilson, J. D., 8161
 Wilson, J. E., 8992, 10763
 Wilson, J. E., 6749
 Wilson, J. K., 2744
 8352, 17441
 Wilson, J. W., 781, 10942
 Wilson, L. R., 12571
 Wilson, M. J., 15347
 Wilson, M. L., 16129
 Wilson, P. T., 15792
 Wilson, P. W., 6295
 8351, 8353, 10069
 11788, 15766, 17440
 Wilson, R. J., 4529
 Wilson, R. W., 7056, 7057
 Wilson, S. J., 10943
 Wilson, L. R., 1040, 16597
 Wilson, W. A., 14821
 Wilson, W. H., 3780
 Wimmer, G., 4882
 Wimpenny, R. S., 5393
 5412, 12607
 Wimpheimer, S., 9418, 16638
 Winchester, C. F., 14652
 Winchester, M. E., 13553
 Winchester, W. T., 514, 5761
 Windaus, A., 12865
 Windcker, W., 10775
 Winder, C. V., 505, 12643
 Windhaber, F., 14153
 Windheuser, C., 17087
 Windisch, S., 6360
 Windle, W. F., 379
 429, 3651, 3769
 3977, 7603, 12643
 Wing, M. W., 18032
 Wing, W. T., 3034
 Wingard, S. A., 3169
 Winge, O., 17501
 Winifred, J., 1351
 Winiwarter, F., 14865
 Winiwarter, H. de, 9763
 Winkelmann, L., 10858
 Winkelmann, N. W., 16910, 16952

- Winkelmann, A., 10878, 12161
Winkelmann, H., 4325
Winkenwerder, W., 11525
Winkenwerder, W. L., 11566
Winkler, A., 9858, 14995
Winkler, A. J., 3013, 13872
Winkler, A. W., 506, 4073, 12643
12654, 13133, 16307
Winkler, C. A., 10764
11492, 15543
Winkler, H., 4810, 9432
Winkler, W., 11085
Winn, M., 17257
Winnik, M., 17442
Winocur, P., 640
Winogradsky, S., 6296, 13690
Winslow, C. E., 3670
Winslow, C. E. A., 8313, 16740
Winslow, C. N., 3997
Winsor, A. L., 3770
Winston, J. R., 13881, 15866
Winter, A. R., 2715, 15116
Winter, C. A., 12643
14965, 14981
Winter, E. A., 7896
Winter, H. F., 15883
Winterbotham, J., 11929
Winterbottom, J. M., 171, 6206, 7038, 7034
Winters, L. M., 8085, 17081
Winters, M., 2671
Winters, R. K., 3087
Winterstein, A., 14848
Winter-Steiner, O., 2122
Vinton, F. R., 13020
Vinton, S. S., 16610
Vintrebelt, P., 15070
Vintrobe, M. M., 1965
5843, 9622, 12852
Vipf, L., 49
Virth, E. H., 1829
Vitschacher, Z. T., 7923
Virtz, J. W., 6326
Vise, B., 405
Vise, C. O., 2081, 2082
Vise, F., 15179
Vise, G. H., 17082, 17083
Vise, I. M., 8001, 12741
Vise, L. E., 4954
Vise, N. B., 13109
Viscup, C. B., 3215
5079, 5080
Vishart, J., 2500
Vishengrad, M., 15199, 15289
Vising, P. J., 5824
Vissicki, L., 298
Vissicki, G. B., 9764
15026, 15071
Vith, T. K., 5902
Vitham, L., 12791
Vithell, E. R., 8314
Vithers, O. R., 13518
Vittman, E. D., 10472, 10474
Vittold, A., 1826
Vittsch, E. V., 6573, 12510
Vitschi, E., 425, 16932
Vitt, A. W., 8513
Vitte, J., 4606
Vittfogel, H., 2716, 3329
Vittich, 8551
Vittig, H., 3072, 8073
Vittkower, E., 2590, 16240
Vittlake, E. B., 4741
Vittmann, L., 9563
Vittmer, W., 3332
Vitta, L. J., 9753
Vöhlisch, E., 12771
Vöhlisch, E. A., 5569
Vöhlisch, M., 8552
Vöhlisch, A. van der, 4281, 5793, 7549
9822, 9323, 12960
Voerner, C. A., 976, 16491
Voglom, W. H., 613, 16887
Vohl, M. G., 9644
Vohlfarth, T. A., 14698
Vohlfarth, E., 10279
Vohlfell, T., 4530
Vöhlisch, E., 3613
Vöhlisch, E., 3639
Wojciechowski, J., 17619, 17620
Woke, P. A., 5027, 6714
Woker, G., 1942
7816, 12053, 16383
Wokes, F., 3932
Wolbach, S. B., 2059
Wolcott, G. N., 5295
Wolcott, G. N., 10459
Wold, M., 11632
Wolf, 6126
Wolf, A., 243
Wolf, B., 15572
Wolf, C. B., 8514
Wolf, E., 2197
2199, 2200, 7628
7630, 7631, 7632
11125, 13052, 13053
Wolf, F. A., 4742
6635, 6682, 8604
8630, 15470, 15471
Wolf, F. T., 4742
Wolf, J., 1390, 1395
1399, 2035, 11789
15769, 15770, 16124
Wolf, J. Z., 4418
Wolf, L. E., 15891
Wolf, M., 7230
Wolfe, G. E., 2753
Wolfe, H. R., 6117, 17175
Wolfe, H. S., 8515
Wolfe, J. M., 614, 16657
Wolfe, L. R., 1653
Wolfe, T. P., 7088
Wolfenbarger, D. O., 14137
Wolfe, O., 536
Wolfe, E. K., 14194
Wolfe, G., 9599
Wolfe, H. G., 12643
Wolfe, H. L., 9576
Wolfe, J. W., 6166
Wolfe, N. O. C., 15138
16061, 17142, 17143
Wolffhügel, K., 3281
Wolf-Heidegger, V., 15040
Wolfsen, F., 1578, 6782
Wolley, J. R., 12643
Wollstein, A., 532
14819, 14866
Wolman, A., 15848
Wolman, I. J., 13838
Wolszyska, J., 10102, 17483
Wolsky, A., 3785
9674, 9796, 16194
Wolter, F., 15349
Wolter, J. W., 7886
Wolters, K. L., 4542
Womersley, H., 3315
3316, 3333
3340, 3371
Wong, S. C., 2591, 2592
9898, 9900, 13505
Wonser, C. H., 1219, 11971
Woo, T., 7580
Wood, A. A., 10419
Wood, A. E., 18108
Wood, E. H., 7721, 12643
Wood, F. C., 15764
Wood, H. E. 2nd, 7058
Wood, J., 5011
Wood, J. E., 14782
Wood, J. G., 8590, 17717
Wood, J. L., 9189
12803, 14485
Wood, R. C., 6494
7035, 13918
Wood, S. E., 5435
Wood, W. B. Jr., 11363
Woodard, G., 16977
Woodburn, R. T., 14001
Woodbury, R. A., 4071
12643, 13192
Woodcock, H. E. de C., 4617
Woodford, A. O., 4617
4699, 17617
Woodford, E. K., 4912, 6559
Woodhall, B., 9600
Woodhead, 11567
Woodhill, A. R., 6708
Woodhouse, D. L., 594
Wood-Jones, E., 728
4869, 4884, 16978
Woodman, H. E., 4852
4853, 4854, 15102
Woodman, R. M., 17642, 17677
Woodruff, L. C., 9214, 12833
Woodruff, S., 1213, 12054
Woods, A. C., 2522
Woods, D. D., 8367
Woods, F. A., 16212
Woods, R. S., 12, 5207
Woodson, R. E. Jr., 6429, 11900
Woodward, A. S., 12430, 12431
Woodward, G. E., 12708, 16370
Woodward, J. C., 17604
Woodward, M. W., 12823
Woodcock, C. E., 11665
Woodridge, W. R., 288
Wooley, J. G., 15166, 15253
Woollard, H. H., 708
7960, 17066
Woolley, D. W., 272
3730, 6311, 17474
Woolpert, O. C., 17322
Wooster, L. D., 5378
Wooton, L. B., 13872
Worcester, J., 8312, 16826
Work, C. E., 11007, 11008
Work, P., 1251
Work, T. S., 6557
Worley, C. L., 3067, 17704
Worm, M., 12899
Wormald, H., 3117, 8633
Wormall, A., 8098
8175, 17139
Worsaae, E., 1802
Worth, H., 513
Worthington, E. B., 5399
Worthington, R. V., 428
Worthley, H. N., 3212, 12180
Worzella, W. W., 6495
Worznjak, J. J., 12643
Wosedalek, J. E., 9765
Wottge, K., 16326
Woycik, S., 3082
Wrede, C. M., 9458
Wrenshall, C. L., 8488
Wright, A. W., 614, 16657
Wright, C. I., 13178
Wright, D. W., 5046, 17882
Wright, E., 1428
3169, 14100
Wright, E. G., 18083
Wright, F. H., 15855, 16823
Wright, G. W., 9536, 12643
Wright, H. A., 8244
Wright, H. D., 4621
4622, 15350
Wright, I. S., 5850, 6115
11020, 11186, 11222
Wright, J. G., 1019, 11757
Wright, K. E., 12091, 15110
Wright, L. D., 7406
Wright, L. E., 17604
Wright, L. K., 8169
Wright, M. D., 7476
Wright, N., 1943, 13919
Wright, R. O., 8477
Wright, R. D., 363
615, 696
Wright, R. P., 4285
Wright, S., 1737
12516, 16275, 16644
Wright, S. J., 4827
Wright, T., 781
Wright, W. D., 7649
Wright, W. H., 14192
14195, 17282, 17922
Wright-Smith, R. J., 5878
Wroblewski, A., 3014
Wu, C. H., 17033
Wu, C. J., 8245, 10030
Wu, H., 2523, 8124, 8195
8162, 12792, 13451
13452, 13453, 16460
Wu, J. P., 9901
Wu, J. S., 5350
Wu, K., 1595
Wu, L. S., 17923
Wu, S. K., 5382
Wu, Y. K., 10509
Wuhrmann-Meyer, K., 17705
Wuhrmann-Meyer, M., 17705
Wülfert, K., 5548
Wulff, H. D., 50, 17563
Wülker, H., 7165
Wunder, J., 9675
Wunderly, J., 9757
Wünsche, Hans-Wolf-gang, 1908
Wurm, K., 13248
Wurm, M., 7019
Wurmback, H., 713
Wurmser, L., 14815
Wurmser, R., 9185
Würth, A., 8031
Wüstenberg, J., 8163
Wyard, S., 645
Wyatt, F. A., 8479
Wyatt, W. R., 7484
Wyburn, G. M., 17046
Wyche, R. H., 13816
Wycheley, S. R., 16125
Wyckoff, R. W. G., 955
1444, 2610
9904, 13557
Wyckoff, W. G., 3129
Wyk, C. M. v., 5895
Wyllie, C. E., 782
Wyllie, R. B., 10178
Wyllie, J., 11717, 11783
Wyman, D., 6527
Wyman, J. Jr., 7394, 7895
Wyman, L. C., 9577
Wynn, W., 9198
10983, 12643
Wynne, A. M., 1895
Wynne-Edwards, V. C., 18084
Wynns, H. L., 15351
Wyss, O., 15766
Wyss, O. A. M., 9276, 16585
X
Kharr, R., 7921
Y
Yaguda, A., 11336
Yakimoff, V. L., 14204
Yakimoff, W. L., 1587, 3271
1587, 16933
Yamada, M., 341, 4531
Yamada, P. M., 6517
Yamada, R., 8154
13565, 13587
Yamada, Y., 8380, 8381
8382, 8383, 8384
Yamafuji, K., 6601
Yamagata, S., 15425, 15426
Yamaguchi, S., 3231, 3232
Yamaguti, S., 6808
Yamamoto, K., 2593
Yamamoto, W., 1429
Yamanaka, T., 1971
Yamane, G., 15721
Yamane, J., 7160
Yamanouchi, Y., 4171
Yamasaki, H., 7896
Yamasaki, M., 1214
Yamashina, M., 16105
Yamashita, H., 12699, 12705
Yamazaki, T., 8154
Yanagisawa, K., 13564
Yanagita, T., 4397
Yanamura, H., 13458
Yang, C. T., 8708
Yang, Y. N., 8315, 8316
10981, 11718, 13660
Yano, M., 4532
Yanovsky, E., 8516, 11958
Yanovsky, M., 4245
Yanowitz, M., 11206, 12643
Yao, H. Y., 17924
Yao, H., 17219
Yap, E., 15874
Yapp, W. B., 12645
Yarbrough, M., 15739
Yarbrough, O. D., 11044, 11372
Yarwood, C. E., 3169
6687, 6688, 15889
Yä-Shu, 630
Yaskin, J. C., 16829
Yasui, K., 1713
Yasuna, E., 516
Yasuzumi, G., 9086
Yates, A. L., 13504
Yates, F., 8968
8975, 16229
Yeager, A. F., 13920
Yeager, J. F., 12513, 14238
Yeager, L. E., 5240
Yeatter, R. E., 16180
Yee, J., 7961, 7962
Yeh, H. L., 2010, 2034
Yeh, K. S., 260
Yen, C. H., 9955
13588, 13661
Yen, W. Y., 2814
Yendo, Y., 8622
Yerkes, R. M., 7059, 10670
Yerushalmi, J., 14375, 16666
Yeuber, F., 5943
Ygartua, F., 12489
Yi, C. L., 7671
Ynalvez, L. A., 1414
Yntema, C. L., 4393
Yoffey, J. M., 864, 876
2631, 7937, 13589
Yohn, L. J., 11960
Yokogawa, S., 8714
Yokoyama, S., 8154
13514, 13515
Yolland, A. B., 2965
Yolores, B. R., 17851
Yoneda, Y., 6385, 6386
Yonge, C. M., 1615, 16011
Yonkman, F. P., 5739, 13178
Yorimitsu, T., 7771
York, H. H., 3169
Yorwood, C. E., 17502
Yoshida, N., 17220
Yoshida, T., 7812, 7813
Yoshii, N., 16571
Yoshii, T., 882
Yoshimura, E., 15779
Yoshimura, T., 7813
Yoshimura, T., 14404
Yoshinaga, T., 16384, 16385
Yoshinari, K., 1714
Yoshio, K., 14521
Yosikawa, H., 12830
Yosikawa, K., 7660
Yost, M., 14641
Yothers, M. A., 15859
Youd, F. R., 6319
Youmans, J. B., 14953
Youmans, W. B., 365
11041, 12643
Youshasset, A. P., 12733
Young, A. G., 5739, 13178
Young, A. M., 8002
Young, D., 8724
Young, D. C., 13503
Young, F. E., 7470
Young, F. G., 300, 3876
3933, 7584, 9361
11413, 12491, 16639
Young, G., 183
Young, H. C., 15883, 17862
Young, H. Y., 15767
Young, J. E., 17849
Young, J. L., 15039
Young, J. O., 15525
Young, J. Z., 4023
4037, 16979
Young, P. A., 3169, 17826
Young, P. T., 3999
Young, V. H., 4996
Young, W. C., 7604, 8043
Youngken, H. W., 1349
Younts, F. O., 6504
Youtz, R. E. F., 5684
Yu, H., 17221
Yu, T. F., 6686, 10990
12140, 12141, 14669
Yusa, A., 7109
Yule, G. U., 1819, 3480
Yunker, T. G., 2828A
Yurkoff, E., 15352
Z
Zabka, J., 10280
Zacho, C. E., 16585
Zachrisson, C. G., 11185

- Zagareli, G. A., 980
 Zahi, P. A., 12696, 15755
 Zain, H., 4172, 14653
 Zakharov, I. P., 10062
 Zakrzewski, W., 7328
 Zaleski, W., 9433
 Zalesky, M. D., 15432
 Zambrano, E., 13617
 Zander, H. A., 15041
 Zandt, F., 3396
 Zappa, G., 7170
 Zapriagaev, F. L., 1162
 Zara, E., 2418
 Zarapkin, S., 5138
 Zarapkin, S. R., 3334
 Zarubailo, T. J., 17698
 Zaumeyer, W. J., 3169
 Zavarzin, A. A., 11376
 11428, 11469
 Zavattari, E., 1574
 Zawadzki, B., 7698
 7699, 11207
 Zaytzeff-Jern, H., 17283
 Zazeela, H., 7700
 7701, 12643
 Zdanova, L. P.,
 17680, 17681
 Zeckwer, I. T., 8934
 Zednik, F., 15633
 Zeidler, H., 12605
- Zein-El-Dine, M.,
 4411, 4684
 Zeisler, M., 3459
 Zeiss, H., 8303
 Zeit, W., 13311
 Zeldenrust, J., 616
 Zeldenrust, L., 9387
 9388, 9389
 Zelenskaya, N. I., 13833
 Zeleny, G. P., 2195
 Zeleny, L., 4855
 Zeller, A., 4953
 Zeller, E. A.,
 1899, 12683
 Zeller, H., 4401
 Zeller, S. M., 15893
 15895, 17762
 Zelyeny, G. P., 4054
 Zemée, G., 1163
 Zenkert, C. A., 1083
 Zentgraf, E.,
 8038, 13967
 Zentner, M., 2307
 4119, 4120
 Zerban, F. W., 16386
 Zerrahn-Wolf, G., 2197
 2199, 2200
 7628, 7631
 Zetlin, A. M., 2247
 Zeuner, H., 13618
 Zewi, M., 2204
 2217, 13055
- Zeylemaker, F. C. J.,
 10335
 Zhinkin, L. N., 11470
 Zhivago, P. I., 10721
 Zia, S. H., 8215, 10030
 Ziegenspeck, H., 1121
 Ziegler, L. W., 10475
 Ziegler, M. R.,
 2338, 4136
 Ziegler, P. T., 6265
 Ziegler, W. M., 391
 Ziemann, H., 1588
 Zienty, F. B.,
 9539, 11210
 Ziffren, S. E., 10944
 11269, 16553
 Zikmund, A., 12695
 Zile Hyde, H. v., 368
 Zilva, S. S., 3640
 7277, 7487, 10063
 Zimmer, J. T., 7036
 Zimmer, K. G., 204
 205, 5305, 16206
 Zimmer, S., 12467
 Zimmerle, H.,
 8039, 7083
 Zimmerman, E. C., 8779
 8780, 8781
 8782, 16034
 Zimmerman, E. G.,
 12357
- Zimmerman, P. W.,
 1362, 1411
 6579, 6613, 13990
 17682, 17683, 17688
 Zimmermann, R., 3853
 Zimmermann, W., 4721
 Zimmet, D., 16536
 Zinn, C. J., 2269, 7345
 Zinnemann, I.,
 931, 4631
 Zinnemann, K.,
 931, 4631
 Zinnitz, F., 2133, 4173
 Zinsser, H., 4603
 9902, 12485, 15427
 Zintheo, C. J. Jr., 16327
 Zintl, M., 16187
 Zipf, H., 3656, 16404
 Zipf, K., 555
 Zironi, A., 2780, 13003
 Ziskind, J., 13584
 Zittle, C. A., 12643
 15167, 17222
 Zobel, R., 3055
 Zobel, C. E., 2763
 Zofjevsky, V., 2606
 Zohary, M., 9039
 Zolog, N., 16488
 Zon, L., 14654
 Zondek, B., 5517, 7902
 9390, 9391, 16990
 Zook, J., 2080
 Zorn, C. M., 13189
- Zorn, W., 11493
 Zossimovitch, V. I.,
 12539
 Zotterman, Y., 7672
 Zottner, G., 6110
 11748, 13530
 Zuckerman, S., 2438
 3790, 11100, 11405
 12491, 13071, 16991
 Zuger, B.,
 5662, 8111, 8112
 8113, 8114, 11528
 11529, 11530, 17223
 Zuidema, P. J., 9608
 Zuitin, A. I.,
 8920, 16165
 Zummo, C., 5603
 Zundel, G. L., 11831
 Zunz, E., 556
 2339, 5794, 7814
 Zurrow, H., 11197
 Zurukzoglul, St., 4601
 Zwan, A. v. d., 17059
 Zweifach, B. W., 7943
 Zweimer, R. L.,
 5097, 7389
 Zwick, 6173
 Zwick, W., 4606
 Zwilling, E., 5973
 Zwingli, F., 13235
 Zygmunt, A., 1589
 Zylberszac, S., 4370

SYSTEMATIC INDEX

(For introductory guide see pages 1812-1813)

PLANT KINGDOM

PHYL., 2905

ALGAE

DIST., (†) 2784; MORPH., 1586, 6332; TAX., 1586, 11809

(Classification according to Engler and Prantl, "Die Natürlichen Pflanzenfamilien," 2nd ed., supplemented where yet incomplete by the 1st ed., and by Pascher, "Süsswasserflora Deutschlands, u. s. w.," and other sources.)

MYXOPHYCEAE

TAX., 1064

ARCHIPLASTIDEAE

COCCOGONEALES

CHROOCOCCACEAE

Aphanocapsa, TAX., 8385
Aphanothece, TAX., 8385
Chroococcus, TAX., 8385
Gloeocapsa, TAX., 8385
Merismopedia, TAX., 8385
Microcystis, TAX., 8385
Oncoyrsa, TAX., 8385
Synecococcus, TAX., 8385
Synecocystis, TAX., 8385

CHAMAESIPHONACEAE

Chamaesiphon, TAX., 8385
Stichosiphon, TAX., 8385

HORMOGONEALES

OSCILLATORIACEAE

Hypheothrix, TAX., 15437
Lyngbya, TAX., 8385
Oscillatoria, TAX., 8385
Phormidium, TAX., 8385
Porphyrosiphon, TAX., 1064
Scenedesmus, TAX., 8385, 15437
Spirulina, TAX., 8385
Symploca, TAX., 8385

NOSTOCACEAE

Anabaena, TAX., 8385, 10104, 15437
Lindrodospermum, TAX., 8385
Nostoc, TAX., 8385, 15437

MICROCHAETACEAE

Lulosira, TAX., 2789

SOYTONEMATACEAE

Icytonema, TAX., 8385, 15437
Polypothrix, TAX., 15437

STIGONEMATACEAE

Fischerella, TAX., 2789, 8385
Lapallosiphon, TAX., 8385
Mastigocladus, TAX., 8385
Stauronemata, MORPH., 8377

RIVULARIACEAE

Calothrix, TAX., 8385, 15437
Rivularia, L. H., 16262

CHLOROPHYCEAE

TAX., 2791, 6330

PROTOCOCCALES

VOLVOCAACEAE

CYT., 7116; TAX., 10106
Chlorogonium, TAX., 2789
Platydictyon, DIST., 1071
Polytoma, CYT., MORPH., 10107
Volvox, L. H., MORPH., 8378;
TAX., 2789, 8378

CHLOROCOCCACEAE

Characium, TAX., 2789, 6331
Sykidion, TAX., 6331

OOCYSTACEAE

Prototheca, TAX., 6327

COELASTRACEAE

CORONASTRUM, 4732

CHAETOPHORALES

SAPROCHAETACEAE, N. FAM., 15433; Prasiolaceae, TAX., 1070

SAPROCHAETACEAE

SAPROCHAETE, 15433

ULOTRICHACEAE

Ulothrix, L. H., 2807

ULVACEAE

Codium, TAX., 2793
Enteromorpha, CYT., MORPH., TAX., 13725; L. H., 8381
Monostroma, L. H., 8381
Ulva, L. H., 8381; TAX., 2793

CHAETOPHORACEAE

Bulbocoleon, L. H., 8378
Gomontia, DIST., 11805
Stigeoclonium, TAX., 2789

OEDOGONIACEAE

Oedogonium, TAX., 6333

SIPHONOCLODALES

CLADOPHORACEAE

Cladophora, TAX., 2793
Urospora, TAX., 2793

DASYCLADACEAE

Acetabularia, CYT., MORPH., 10103

SIPHONALES

BRYOPSIDACEAE

Bryopsis, TAX., 2793

CAULERPACEAE

Caulerpa, TAX., 2793

DERBESIACEAE

Derbesia, TAX., 8382

INCERTAE SEDIS

(In Siphonales)
Acicularia, TAX., (Ter) 17482
Cymopolia, TAX., (Ter) 17482
Neomeris, TAX., (Ter) 17482
Vaginopora, TAX., (Ter) 17482

CONJUGALES

DESMIDIACEAE

Cosmarium, TAX., 2789, 11808

ZYGNETACEAE

Spirogyra, L. H., 8375
Spirogyra, L. H., 1082

CHARALES

CLAVATOPHORACEAE, N. FAM., (J) 17481

CHARACEAE

Chara, TAX., (PI) 17483
Nitella, TAX., (PI) 10102

CLAVATOPHORACEAE

Clavator, TAX., (J) 17481
PERIMNESTE, (J) 17481

INCERTAE SEDIS

(In Charales)
Characites, TAX., (J) 17481
CHAEAXIS, (J) 17481

INCERTAE SEDIS

(In Chlorophyceae)
Algaeites, TAX., (J) 17481
CAYEUXIA, (†) 15428

XANTHOPHYCEAE (HETEROKONTAE)

HETEROCOCCALES

BOTRYOCOCCACEAE

Botryococcus, DIST., MORPH., (†) 13719

HETEROTRICHAE

TRIBONEMACEAE

Tribonema, DIST., L. H., 13737

CHLOROMONADO-PHYCEAE (CHLOROMONAD-ALES)

(No material)

EUGLENOPHYCEAE (EUGLENALES)

(No material)

CHRYSTOPHYCEAE

CHRYSONOMADALES

CHROMULINACEAE

Chrysococcus, TAX., 2792

DINOPHYCEAE

(See Dinoflagellida, under Protozoa, p. 1868²)

BACILLARIOPHY-CEAE (DIATOMACEAE)

DIST., (†) 2782

PENNALES

EUNOTIACEAE

Eunotia, TAX., 8376

NAVICULACEAE

Navicula, TAX., 8376
Stauroneis, TAX., 8376

PHAEOPHYCEAE

TAX., 13724

PHAEOSPORALES

Ectocarpales, TAX., 11804

ECTOCARPACEAE

Ectocarpus, TAX., 2793
FELDMANNIA, 11804
KUCKUCKIA, 11804

ASPEROCOCCACEAE

Colpomenia, TAX., 2793

ELACHISTEACEAE

Septonema, L. H., 11819

LITHODERMATAEAE

Lithoderma, TAX., 11806

CYCLOSPORALES

LAMINARIACEAE

Arthrothamnus, L. H., MORPH., 8383

Chorda, L. H., MORPH., 8374
Eisenia, CYT., MORPH., 6328
Kjellmaniella, L. H., MORPH., 8374
Laminaria, L. H., MORPH., 8374
Nereocystis, MORPH., 4728

FUCACEAE

Fucus, MORPH., 2790
Sargassum, TAX., 8384

INCERTAE SEDIS

(In Phaeophyceae)
LITHODORA, 10105

RHODOPHYCEAE

PHYL., 2794

FLORIDEAE

NEMALIONALES

HELMINTHOCLADIACEAE
Liagora, TAX., 8380

LEMANEACEAE

Lemanea, DIST., 8379

CHAETANGIACEAE

Scinaia, TAX., 8384

GIGARTINALES

GELIDIAEAE

Caulacanthus, MORPH., 1065
Gelidium, TAX., 4729

GIGARTINACEAE

Callymenia, TAX., 8384
Phyllophora, TAX., 4729, 13726

RHODYMENIALES

RHODYMENIACEAE

Epymenia, TAX., 13726
Rhodymenia, TAX., 13726
Sarcodia, TAX., 8384
Sebdenia, TAX., 8384

DELESSERIACEAE

Erythroglomus, TAX., 8384

RHODOMELACEAE

Endosiphonia, TAX., 15435
Hutchinsia, TAX., 4729
Spirocladia, TAX., 15436
Strebloladia, TAX., 4729

CERAMIAEAE

Callithamnion, TAX., 13726
Plumaria, CYT., MORPH., 13722
Spermothamnion, TAX., 8382

CRYPTONEMIALES

GRATELOUPIACEAE

Grateloupia, TAX., 4729, 8384

NEMASTOMACEAE

Schizymenia, TAX., 4729

SQUAMARIAEAE

Hildenbrandia, MORPH., 8377

INCERTAE SEDIS

(In Rhodophyceae)
SELKIA, 10105

INCERTAE SEDIS

(In Algae)
Ceratodiscus, TAX., 15434
GLOBULINEA, (†) 4127

SCHIZOMYCETES · MYXOMYCETES · FUNGI (including LICHENES)

SCHIZOMYCETES
(BACTERIA)

TAX., 2767, 17468

EUBACTERIALES
MORPH., TAX., 17460COCCACEAE
Staphylococcus, L. H., 12216
Streptococcus, L. H., 12216SPIRILLACEAE
SPOROVIBRIO, 6820BACTERIAEAE
TAX., 1061, 6299
Achromobacter, TAX., 2745
Bacillus, L. H., 12216, 15939;
TAX., 15423
Bacterium, TAX., 11728
Brucella, L. H., 12216
Listeria, MORPH., 4704BACILLACEAE
CYT., L. H., MORPH., 11789;
TAX., 6300
Bacillus, MORPH., 13701; TAX.,
4708, 4719, 11800
Clostridium, MORPH., 4708;
TAX., 1054, 4697, 4708
Plectridium, TAX., 13673AZOTOBACTERIAEAE
Azotobacter, TAX., 10072ENTEROBACTERIAEAE
TAX., 8362
Aerobacter, TAX., 17448
Bacterium, MORPH., 8363; TAX.,
15413
Erwinia, TAX., 6299
Pseudomonella, TAX., 17378
Salmonella, TAX., 10083, 11635,
15417
Shigella, TAX., 8355PARVOBACTERIAEAE
Hemophilus, TAX., 10085
MORAXELLA, 10085
Pasteurella, TAX., 6315, 13605PSEUDOMONADACEAE
Phytomonas, TAX., 6299
Pseudomonas, TAX., 6274, 15413
Vibrio, MORPH., 6320
XANTHOMONAS, 15413RHIZOBIACEAE
Chromobacterium, TAX., 17450
Rhizobium, MORPH., 4701, 17421NEISSERIAEAE
Neisseria, TAX., 2776ACTINOMYCETALES
ACTINOMYCETACEAE
Actinomyces, MORPH., 4644
Erysipelothrix, MORPH., 4704MYCOBACTERIAEAE
Mycobacterium, L. H., MORPH.,
8364; TAX., 2743CHLAMYDOBACTERIALES
CHLAMYDOBACTERIAEAE
ANACAMPTOTRICH, 1057THIOBACTERIALES
BEGGIATOACEAE
THIONEMA, 8359SPIROCHAETALES
PHYL., 8899SPIROCHAETACEAE
Leptospira, TAX., 13610, 17292
Spirochaeta, TAX., 964, 14192
Treponema, MORPH., 4706; TAX.,
11633INCERTAE SEDIS
(In Schizomycetes)
Bartonella, TAX., 14175
Rickettsia, PHYL., 8899; TAX.,
8195

MYXOMYCETES

DIST., 2800, 2811, 4743;
TAX., 15472

PHYSARAE

PHYSARACEAE
Foligo, L. H., 1085, 6361DIDYMIACEAE
Didymium, DIST., 1084, 4743;
MORPH., 1586, 4743; TAX.,
1084STEMONITALES
STEMONITACEAE
Stemonitis, L. H., 6361CRIBRARIACEAE
RETICULARIACEAE
Enteridium, L. H., 1085, 6361
Reticularia, L. H., 6361TRICHIALES
ARCYRIACEAE
Arcyria, L. H., 1085ACRASIALES
DICTYOSTELIACEAE
Dictyostelium, L. H., 6362INCERTAE SEDIS
(In Myxomycetes)
Sappinia, L. H., MORPH., 11832

FUNGI

BIBL., DIST., 2811; MORPH.,
6332; TAX., 9977

PHYCOMYCETES

DIST., 2800

CHYTRIDIALES
DIST., TAX., 15445; L. H.,
17488; MYCELIOCHYTRI-
ACEAE, N. FAM., 17490PLASMIDIOPHORACEAE
POLYMYXA, 15454OLPIDIAEAE
Olpidiopsis, TAX., 15461
Pseudolpidium, MORPH., 10115;
TAX., 10115, 15461SYNCHYTRIAEAE
(Incl. PROTOMYCETACEAE)
Rhizophidium, DIST., L. H.,
MORPH., 13737CHYTRIDIACEAE
(Incl. RHIZIDIACEAE and
CLADOCHYTRIDIACEAE)
CATENOCHYTRIDIUM, 17484
Chytridium, DIST., L. H., 13737;
TAX., 15444Coenomyces, TAX., 17490
Diplophyetis, DIST., L. H.,
MORPH., 13737
Hypochoytrium, TAX., 17490
Macrochytrium, TAX., 17490
Megachytrium, TAX., 17490
Polyphagus, DIST., L. H., 13737
Rhizophidium, L. H., 2807,
10114; MORPH., 2807
SEPTOCHYTRIDIUM, 17484
TYLOCHYTRIDIUM, 15452ZYGOMYCETES
MUCORACEAE
DIST., 8388; TAX., 6354;
SPORODINEAE, N. TRIBE,
6354; THAMNIDEAE, N.
TRIBE, 6354Absidia, TAX., 6354
Choanephora, L. H., 15442
Cunninghamella, TAX., 6354
Dicranophora, TAX., 6354
Lichtheimia, TAX., 6354
Mucor, TAX., 6354, 11826,
11828
PROTOABSIDIA, 6354
Rhizopus, TAX., 6354
Syncephalis, TAX., 6354
Tieghemella, TAX., 6354
Zygorhynchus, TAX., 6354ENDOGONACEAE
MORPH., PHYL., 15438
Rhizophagus, MORPH., TAX.,
15438
Scleroerystis, TAX., 11820EMPUSACEAE
Basidiobolus, CYT., 7107
Empusa, DIST., L. H., 10457ZOOPOGACEAE
Zoopage, TAX., 6341

OOMYCETES

SAPROLEGNIACEAE
CYT., 7101
Achlya, TAX., 15443, 15467
Aphanomyces, L. H., 1082
Apodachlya, TAX., 15443
Dictyuchus, TAX., 15467
Isoachlya, TAX., 15467
Saprolegnia, TAX., 15467PERONOSPORACEAE
Albugo, MORPH., 3169
Bremia, TAX., 8408
Peronosplasmopara, L. H., 6355
Phytophthora, L. H., 2795
Pseudoperonospora, MORPH.,
12121
Pythium, MORPH., 8603, 10842BLASTOCLADIACEAE
Blastocladiella, L. H., 11810

ASCOMYCETES

DIST., 2800, 4740, 4745,
13741; L. H., 4745, 13741;
MORPH., 4740, 13729;
TAX., 13729; Discomycetes,
DIST., TAX., 1080; Myri-
angiales, TAX., 6350GYMNASCALAE
SACCHAROMYCETACEAE
Debaryomyces, L. H., 9978;
TAX., 2728
Saccharomyces, CYT., 16151;
TAX., 6340
Saccharomycodes, CYT., L. H.,
17501
Zygosaccharomyces, TAX., 6340INCERTAE SEDIS
(In Gymnascales)
Zygopichia, TAX., 6340PERISPORIALES
Chaetothyriaceae, TAX.,
13733EUROTIACEAE
Emericella, DIST., MORPH., TAX.,
13731ERYSIPHACEAE
Microspheera, MORPH., 8391
Sphaerothera, MORPH., 6687PERISPORIACEAE
TAX., 13733
Dimerium, TAX., 17500
Meliola, TAX., 17487
Perisporium, CYT., MORPH.,
13727ENGLERULACEAE
Englerula, TAX., 17498
Schiffnerula, TAX., 13738COPNODIACEAE
TAX., 13733
Balladyna, TAX., 17500
Balladynella, TAX., 17500
Balladynopsis, TAX., 17498
Chaetothyrium, TAX., 2811SPHAERIALES
NIESSLIAEAE, N. FAM.,
15453SPHAERIAEAE
ABAPHOSPOREA, 15453
Acanthostigma, TAX., 15453
Acanthostoma, TAX., 17500
Amphisphaeria, TAX., 15453
Calosphaeria, TAX., 15453
Calosporella, TAX., 15453
Ceratospheeria, TAX., 15453
Ceratostomella, MORPH., 12131
Clathrospora, TAX., 15453
Cryptodidymosphaeria, TAX.,
17499Cryptosporella, TAX., 15453
Diatrype, TAX., 15795, 17499
Diatrypa, TAX., 17499
Eutypella, TAX., 17499
Glomerella, TAX., 17500
Gnomonia, MORPH., 1424; TAX.,
15453
Gnomoniopsis, TAX., 15453
Helminthosphaeria, TAX., 15453
Inzengaea, TAX., 13731
Leptosphaeria, TAX., 8408,
15453
Leptosporella, TAX., 8407Massaria, TAX., 15458
Massariopsis, TAX., 15453
MELANOPELTA, 15458
Melanopsamma, TAX., 15453
Metasphaeria, TAX., 15453
Mycosphaerella, MORPH., 10118;
TAX., 3169, 17499, 17500
Mycotodes, TAX., 15453
Nematostigma, TAX., 17500
Neopectia, TAX., 15453
Nitschkia, TAX., 13736, 15453
PHAEASPIIS, 15453
Phomatospira, TAX., 15453
Physalospora, TAX., 15453
Pleospora, TAX., 14044, 15453
Pseudothyridaria, TAX., 17499
PSEUDOTRICHIA, 15453
Pyrenophora, TAX., 15453
Saccothecium, TAX., 15453
Sphaerella, TAX., 15453
Sphaeria, TAX., 13736
STEREOSPHAERIA, 15453
Teichospora, TAX., 15453
Trematosphaeria, TAX., 15453
Valsella, TAX., 15453
Xylotryum, TAX., 8407
ZOPFINULA, 15453HYPOCREACEAE
Balansia, TAX., 2800, 17500
Calonectria, TAX., 15453, 17500
Claviceps, L. H., 10845
Cordyceps, TAX., 15456
Dothichloe, L. H., TAX., 13732
Hypomyces, TAX., 8399
Melanospora, L. H., 4736
Nectria, TAX., 8407, 15453,
17500
Neurospora, CYT., 5289; L. H.,
2809, 2810, 6336; MORPH.,
6336
Phaeoconectria, TAX., 15453
Podostroma, TAX., 6387
Thyronectria, TAX., 6346VERRUCARIACEAE
Anthracothecium, TAX., 15474
Dermatocarpus, TAX., 17504
Theidium, TAX., 6364
Verrucaria, TAX., 17503NIESSLIAEAE
ACANTHOSPHAERIA, 15453
MELANOSTIGMA, 15453
OPHIOSTHAERIA, 15453
PLEOSTIGMA, 15453DOTHIDEALES
DOTHIDEACEAE
Dothideovalsa, TAX., 13736
Endodothella, TAX., 17498
Exarmidium, TAX., 15453
Homostegia, TAX., 15453
Phyllachora, TAX., 2800, 8407,
17498, 17500
Rhopoglyphus, TAX., 15453
Scirrhia, TAX., 8407MYRIANGIACEAE
Elsinoe, DIST., L. H., TAX., 2798
KERNIOMYCES, 13738
Myriangium, MORPH., 6350INCERTAE SEDIS
(In Dothideales)
ANGIOTHECA, 17500MICROTHYRIALES
Trichopeltaceae, TAX., 13733MICROTHYRIACEAE
TAX., 13733
Asterina, TAX., 8407, 17487,
17498, 17500
Clypeolella, TAX., 17498
Englerulaster, TAX., 17498
Lembosia, TAX., 17498, 17500
Pseudolembosia, TAX., 8407MICROPELTACEAE
Dictyopeltis, TAX., 17498PHACIDIALES
HYSTERIACEAE
Glioniella, TAX., 11810
Glioniopsis, TAX., 11812, 11814
Hypodermopsis, TAX., 11814
Hysterium, L. H., 11819; TAX.,
11812, 11814, 11819
Hysterographium, TAX., 11814
Mytilidion, L. H., TAX., 11819

ASCOMYCETES (Concluded) · PROMYCETES · BASIDIOMYCETES · DEUTEROMYCETES

GRAPHIDACEAE
Arthonia, TAX., 15473
Arthoniopsis, TAX., 10117
Graphis, TAX., 17503
Opegrapha, TAX., 17503

PHACIDIACEAE
Bifusella, TAX., 11812

STIOTIDACEAE
Diplonaevia, TAX., 6364

PEZIZALES
DERMATEACEAE
Podophaecidium, TAX., 15460

COLEMAACEAE
Lemphoslemma, TAX., 15475

PELTIGERACEAE
Sporopodium, TAX., 10117

LECIDEACEAE
Biatorella, TAX., 6364, 17503
Catillaria, TAX., 6364, 17503
Jecidea, L. H., 1090; TAX., 1089, 1090, 6364, 8412, 15475, 17503

Rhizocarpon, TAX., 6364
Jarcogyne, TAX., 6364, 8413
Jmbilicaria, TAX., 6364, 10116

CLADONIAACEAE
Cladonia, DIST., 4744, 4746, 4747, 6363, 6366; MORPH., 4744; TAX., 4746
tereocaulon, DIST., 6363; TAX., 15475, 17504

PARMELIACEAE
carospora, TAX., 8413
lectoria, TAX., 6364
alenia, TAX., 10117
andelariella, TAX., 6364
ydrothyria, DIST., 18789
ecanora, TAX., 6364, 8412, 15473, 15475, 17503
annoparmelia, TAX., 6364
armelia, TAX., 6364, 8410, 8415, 15473, 17503, 17504
rforaria, DIST., 6363
rtusaria, TAX., 8410, 15473
lyctis, TAX., 15473
lycauliona, TAX., 8412
umalina, TAX., 15473
elotrema, TAX., 15473
nea, TAX., 6364

PHYSCIACEAE
aptychia, DIST., 1092, 13740; L. H., 13740
stenia, TAX., 6364
ellia, TAX., 6364, 17503
loplaca, TAX., 17503
sparrinia, TAX., 6364
JEA, 6364
tillingeria, TAX., 6364
yscia, DIST., 6363
lycauliona, TAX., 6364
otoblastenia, TAX., 6364
renodesmia, TAX., 6364
iodina, TAX., 6364, 15475
oschistes, DIST., 1092
athoria, TAX., 6364, 15473

MOLLISIAACEAE
onidium, TAX., 15453
ULISTASTER, 15453
aeofabraea, TAX., 17500
senopeziza, TAX., 11813

HELOTIACEAE
yscyphe, TAX., 11813
corelmia, TAX., 13453
lotium, MORPH., TAX., 4733
chrum, TAX., 11813
izella, TAX., 15453
erotinia, DIST., 1432; L. H., 10343, 15804, 15809; TAX., 15447

PEZIZACEAE
okeima, DIST., TAX., 6349
mprospora, TAX., 11815
lastiza, TAX., 11815

ASCOBOLACEAE
cobolus, CYT., L. H., 17435

INCERTAE SEDIS
(In Pezizales)
romidotis, TAX., 11813
lphalodinum, TAX., 6364

AGYRIALES
Atichiaeae, TAX., 13733

AGYRIACEAE
Endocolum, TAX., 8407
EXOASCOACEAE
Exoascus, TAX., 6351
Taphrina, DIST., MORPH., 2804; L. H., 2804, 2805; TAX., 2805, 11821, 15451

TUBERALES
TAX., 8390
ELAPHOMYCETACEAE
Elaphomyces, TAX., 17491

TUBERACEAE
MATTIHOLOMYCES, 8390
PETCHIOLOMYCES, 8390
Tuber, MORPH., 4735

INCERTAE SEDIS
(In Ascomycetes)
FRASEBULA, 8407
LUDWIGOMYCES, 15453
PHAEOTHYRIOLUM, 8407

PROMYCETES

PUCCINIALES
(UREDINALES)
CYT., 17494; DIST., 6345, 8396; L. H., 8396, 17494; MORPH., TAX., 6345; PHYL., 8396; Uredineae, DIST., 4738

PUCCINIACEAE
Aecidium, DIST., 6345; L. H., 15457; TAX., 17498, 17500
Blastospora, MORPH., 1076; TAX., 1076, 6347
Cerotellium, TAX., 17498
Chaconia, TAX., 6347
Chrysocyclus, DIST., 6345
Gymnosporangium, MORPH., 17754
Hemileia, TAX., 17500
Maravalia, DIST., 6345; TAX., 6347, 6348
Nysospora, TAX., 8407
Phragmidium, MORPH., 1453
Pileolaria, TAX., 8409
Poliotellium, TAX., 6348
Prospodium, DIST., TAX., 6345
Puccinia, CYT., 17494; DIST., 6345; L. H., 8396, 17494; TAX., 6345, 8409, 17948, 17500

Ravenelia, TAX., 17498
SCOPELLA, 15455
Tranzschelia, CYT., L. H., 17494; MORPH., 8107
Uredo, DIST., 6345; TAX., 6345, 15455
Uromyces, CYT., 17494; DIST., 6345; L. H., 15457, 17494; MORPH., 17760; TAX., 6348, 15455

MELAMPSORACEAE
Calypsotheca, L. H., TAX., 11816
Chrysomyxa, L. H., 8396
Melampsora, CYT., 17494; L. H., 8396, 17494
Phakospora, DIST., 6345

USTILAGINALES
USTILAGINACEAE
Cintractia, TAX., 2800
Sphaerellotheca, L. H., 2814, 15468; TAX., 17500
Tolyposporium, TAX., 17500
Ustilago, L. H., 2814; TAX., 2814, 8407, 8409, 11831, 17500

TILLETIACEAE
Neovossia, TAX., 2811
Tilletia, MORPH., TAX., 4738

BASIDIOMYCETES

DIST., 1072, 2800, 4740; MORPH., 4740; PHYL., 8402; TAX., 15462

TREMELLALES
AURICULARIACEAE
Helicobasidium, DIST., L. H., 13735
Jola, TAX., 11820

TREMELLACEAE
Sebacina, DIST., 2812; MORPH., 2812, 4741
Tulasnella, TAX., 11820

DACRYOMYCETACEAE
Arrhytidia, DIST., TAX., 4734
Calocera, DIST., TAX., 4734
Dacrymyces, DIST., TAX., 4734
Dacryomitra, DIST., TAX., 4734

AGARICALES
HYPOCHNACEAE
Hypochnus, TAX., 15459

THELEPHORACEAE
Corticium, DIST., 2812; MORPH., 2812, 4964; TAX., 15812, 17492
Gyrophana, MORPH., 8400
Mycobonia, TAX., 11820
Peniophora, DIST., MORPH., 2812; TAX., 17492
Stereum, L. H., 6337; TAX., 11820, 15449

CLAVARIACEAE
PHYL., TAX., 15462
Clavaria, TAX., 10112

HYDNACEAE
PHYL., TAX., 15462
Dryodon, MORPH., TAX., 15462
Hydnum, DIST., 8395

POLYPORACEAE
PHYL., 8402; TAX., 11823, 11825
Abortiporus, TAX., 6353
Aurantiporus, TAX., 6353
Boletus, DIST., MORPH., 2801
Coriolopsis, TAX., 6353
Coriolus, TAX., 6353
Daedalea, L. H., 13728; MORPH., 1073, 13728; TAX., 6353, 17486
Fomes, L. H., 1079, 2799; MORPH., 2799, 17493; TAX., 6353

Fomitiporia, TAX., 6353
Ganoderma, L. H., 4737; MORPH., 4737, 17493
Gyroporus, DIST., TAX., 4737
Haploporus, TAX., 6353
Lenzites, TAX., 14042
Microporellus, TAX., 6353
Polyporus, L. H., 18728, 18734; MORPH., 13728; TAX., 6353, 10103
Polystictus, TAX., 6353
Poria, DIST., 4737; TAX., 4737, 6353, 15459, 17492
Pyropolyporus, TAX., 6353
Trametes, TAX., 6353
Tyromyces, TAX., 6353

AGARICACEAE
DIST., 13736
Agaricus, DIST., TAX., 4737
Agrocybe, TAX., 11825
Clitocybe, TAX., 6339, 8403
Collybia, TAX., 10110, 11825
Coprinus, DIST., 2801; L. H., 6343; MORPH., 2801, 6343; TAX., 2801, 2803, 6342, 6343, 6344, 10109, 15448
Cortinari, MORPH., 2803; TAX., 2803, 8393, 8394
Entoloma, DIST., MORPH., 2801
Flammula, DIST., MORPH., 2801; TAX., 8404
Galactopus, DIST., TAX., 4737
Galeropsis, TAX., 15462
Gymnopus, DIST., 4737; TAX., 4737, 8403
Hiatula, TAX., 11825
Hydrocybe, TAX., 8403
Hygrophorus, TAX., 8403
Lactaria, DIST., TAX., 4737
Lactarius, CYT., 44; MORPH., 6359; TAX., 8386, 8397, 11824, 17497
Lepiota, TAX., 8403
Marasmiellus, TAX., 8403
Marasmius, DIST., MORPH., 2801; TAX., 8403, 11825, 15462
Mycena, CYT., 8398; TAX., 8398, 11825, 11827

EU-MYCENA, N. SUBGEN., 8398
PARA-MYCENA, N. SUBGEN., 8398
MYXOCOLLYBIA, 11825
Naucoria, DIST., MORPH., 1075; TAX., 11825
Nolanea, DIST., MORPH., 2801
Panellus, TAX., 15462
Panus, TAX., 15462
Pholiota, L. H., 8405; TAX., 11825

Phyllotopsis, TAX., 15462
Pluteus, DIST., TAX., 4737
Psathyrella, DIST., MORPH., 2801
PSEUDOHATULA, 11825
Rhodopaxillus, TAX., 6389
Rhodophyllus, TAX., 2813
Russula, CYT., 44; TAX., 6356, 8386, 8403, 11825, 13736, 15462
Tectella, TAX., 15462
Velanopus, TAX., 15462
Venenarius, DIST., TAX., 4737
Volvaria, TAX., 11829
Xerula, TAX., 1077

LYCOPERDALES
BATTARRAEACEAE, N. FAM., 11830

LYCOPERDACEAE
Battarraea, DIST., 2802; TAX., 11830
Bovista, DIST., MORPH., 2812
Bovistella, DIST., MORPH., TAX., 2801
Calvatia, DIST., MORPH., 2812
Geaster, DIST., 2812; MORPH., 2812, 8401
Lycoperdon, DIST., TAX., 2812; HIST., L. H., 17496; MORPH., 2812, 6358
Scleroderma, MORPH., 15466

HYMENOGASTRACEAE
PHYL., 8402
DODGEEA, 8402
Gautieria, DIST., MORPH., 2812
Leucogaster, DIST., MORPH., 2812
Rhizopogon, DIST., MORPH., 2812

DEUTEROMYCETES

MORPH., TAX., 13729

PHOMALES
PHOMACEAE
Chaetopyrena, TAX., 15453
Coniothyrium, TAX., 15453, 17500

Diachorella, TAX., 17498
Diplodia, MORPH., 2806
Haplosporella, TAX., 15453
Hendersonia, TAX., 15453
Leptodotiorella, TAX., 17500
Naemosphaeria, TAX., 15464
Phoma, TAX., 10351, 11817, 15453

Phyllostictina, TAX., 17500
Placosphaeria, TAX., 15464
Pyrenochaeta, TAX., 15453
Rhadospora, TAX., 15453, 15473

Robillarda, TAX., 15464
Septoria, TAX., 8407, 15453, 15464, 17487
Sphaeropsis, TAX., 13736
Stagonospora, TAX., 3109, 17499

LEPTOSTROMACEAE
Sacidium, TAX., 15453

DISCELLACEAE
Heteropeltella, TAX., 15464

INCERTAE SEDIS
(In Phomales)
CRYPTOGENE, 17500
CRYPTOGENELLA, 17500
ENERTHIDIUM, 17500
HYPOCLINE, 17500
MASSARIOOTHEA, 17500
OOTHYRIUM, 17500

MELANCONIALES
MELANCONIACEAE
Colletotrichum, TAX., 2811
Coryneum, TAX., 4967
Sphaeloma, DIST., L. H., 2798; TAX., 2798, 14036, 17437
Vermicularia, TAX., 15453

MONILIALES
MONILIACEAE
Aspergillus, DIST., MORPH., TAX., 13731
Beauveria, L. H., 8665, 12229, 15450
Berkhoutia, TAX., 4638
Botrytis, DIST., 12174; L. H., 12174, 14045, 15447; MORPH., 6686
Cephalosporium, MORPH., 1427
Didymopsis, TAX., 17500
Eugotrichum, TAX., 4638
Fusoma, TAX., 17487

Geotrichum, TAX., 4638, 15469
 Gliocladium, TAX., 11822
 Haplaria, TAX., 17487
 Malbranchea, TAX., 2796
 Monacrosporium, TAX., 17487
 Monilia, TAX., 17407
 Nomuraea, L. H., 3224
 Oidium, TAX., 17487
 Oospora, TAX., 15453
 Penicillium, L. H., 6338; TAX., 6338, 11828, 17407
 Phymatotrichum, DIST., 10371
 Scopulariopsis, L. H., TAX., 6338
 Spicaria, DIST., 12174; L. H., 3205, 12174

DEMATIACEAE
 Arthrobotryum, TAX., 17489
 Cercosporia, TAX., 17487
 Cercospora, TAX., 3169, 10109, 17487
 Cladosporium, TAX., 17500
 Helminthosporium, TAX., 17487

HEPATICAEE

TAX., 15477

MARCHANTIALES

MARCHANTIACEAE
 Conocephalus, CYT., 47
 Dumortiera, CYT., 48

JUNGERMANNIALES

JUNGERMANNIACEAE
 Aneura, TAX., 4752
 Bazzania, TAX., 8419
 Chiloscypus, TAX., 4752
 Frullania, CYT., 47
 Heteroscyphus, TAX., 4752
 Mastigobryum, TAX., 8419
 Mylia, TAX., 4752
 Pellaviciaria, CYT., 5295
 Peltia, MORPH., 6370
 Pseudoneura, TAX., 4752
 Riccardia, TAX., 4752

MUSCI

TAX., 15478

SPHAGNALES

SPHAGNACEAE
 Sphagnum, TAX., 11837

Heterosporium, TAX., 15453
 Macrosporium, TAX., 14044, 15464
 Margarinomyces, L. H., 6338
 PANTOSPOREA, 1074, 17487
 Polythrincium, TAX., 17487
 Sporidesmium, L. H., 11819
 Torulopsis, L. H., 6360

TUBERCULARIACEAE

Cerebella, TAX., 2811
 OHRYSACHNE, 1074, 17487
 Oocosporea, TAX., 13736
 Dendrodichium, TAX., 15453
 Fusarium, MORPH., 10321; TAX., 10321, 11817, 15453, 15458
 Sphaerosporium, TAX., 13736
 Volutella, TAX., 15453

STILBACEAE

Isaria, TAX., 15453
 Tilachlidium, L. H., TAX., 6338

DERMATOPHYTA BLASTOARTHROSPORO- RINEAE, N. SUBORDER,

4645
 Coccidioides, L. H., 4639
 Epidermophyton, TAX., 13623
 Favotrichophyton, TAX., 4633
 Piedraia, TAX., 4633
 Proteomyces, TAX., 4645
 Trichophyton, TAX., 4634
 Trichosporon, TAX., 4645

STERILE MYCELIA

Rhizoctonia, DIST., L. H., 13735;
 MORPH., 17752; TAX., 17487
 Sclerotium, MORPH., 4963

PSEUDOSACCHAROMYCETES
 Candida, MORPH., TAX., 4641
 Cryptococcus, TAX., 6205, 8249, 11644, 13620

Geotrichoides, TAX., 4645
 Histoplasma, TAX., 4635
 Mycotolula, TAX., 4636
 Pseudomycoderma, TAX., 4638, 15469
 Sporobolomyces, TAX., 4637
 Torulopsis, TAX., 4642

INCERTAE SEDIS

(In Deuteromycetes)
 HADROSPOREUM, 8407
 HERPOSIRA, 8407
 KLEBAHNOPYCNIS, 15453
 MELANODUCHIUM, 8407
 PLACELLA, 8407

INCERTAE SEDIS

(In Fungi)
 ARTHROGRAPHIS, 11643

BRYOPHYTA

TAX., 4748, 15479

BRYALES

SELIGERACEAE
 Blindia, TAX., 11844
 Hymenoloma, TAX., 11844
 Verrucidens, TAX., 11844

DICRANACEAE

Bryopteris, TAX., 11844
 Campylopus, TAX., 11841
 Dicranoweisia, TAX., 11844
 Oncophorus, TAX., 4749

CALYMPERACEAE

Calymperes, TAX., 8417

ENCALYPTACEAE

Encalypta, TAX., 4748

POTTIACEAE

Anoetangium, TAX., 4748
 Astomum, TAX., 4748
 Barbula, TAX., 4748, 6369, 6372
 Didymodon, TAX., 4748
 Gymnostomum, TAX., 4748
 Hymenostomum, TAX., 4748
 Leptodontium, TAX., 4748
 Molendia, TAX., 4748
 Phascum, TAX., 4748
 Pottia, MORPH., 15481

Sarconeurum, TAX., 6369
 Timmiella, TAX., 4748
 Tortella, TAX., 11841
 Tortula, TAX., 4748, 6373
 Trichostomum, TAX., 4748
 Weisia, TAX., 4748

GRIMMIACEAE

Grimmia, DIST., 1094; TAX., 6369
 Rhacomitrium, TAX., 4749

BRYACEAE

Brachymenium, TAX., 11836
 Bryum, DIST., 1094; TAX., 6369
 Webera, TAX., 11841

MNIACEAE

Mnium, DIST., 1094

ORTHOTRICHACEAE

Orthotrichum, DIST., 1094;
 TAX., 1095
 Zygodon, TAX., 4748, 11841

HOOKERIACEAE

Lepidopilum, TAX., 11839
 PSEUDOLEPIDOPILUM, 11839

FABRONIACEAE
 Anacamptodon, TAX., 11845
 Ectropodon, TAX., 11845

LESKEACEAE
 Pseudoleskea, TAX., 4751

AMBLYSTEGIACEAE
 Drepanocladus, DIST., 1094

BRACHYTHECIACEAE
 Brachythecium, DIST., 1094
 Ishibaea, TAX., 11845

PLAGIOTHECIACEAE
 Plagiotheciium, DIST., 6371

SEMATOPHYLLACEAE
 Rhaphidostichum, TAX., 8417

HYPNACEAE
 Ctenidium, TAX., 2828A
 Hypnum, DIST., 1094
 Isopterygium, DIST., TAX., 6371
 Pylaisia, TAX., 6373

BUXBAUMIACEAE
 Buxbaumia, TAX., 4748

POLYTRICHACEAE
 Polytrichum, CYT., 7094

PTERIDOPHYTA

CYT., L. H., 17561; PHYL., 2905, 4722; TAX., 1106, 1108, 1109, 11847

FILICALES

MORPH., 17552

OPHIOGLOSSACEAE
 Botrychium, DIST., 11848; TAX., 2815
 Helminthostachys, TAX., 2815
 Ophioglossum, TAX., 2815, 6376, 17508

OSMUNDOPTERIS, 6376

MARATTIACEAE

Angiopteris, TAX., 8421

HYMENOPHYLLACEAE

Hymenophyllum, DIST., 17509
 Trichomanes, DIST., 17506, 17509

CYATHEACEAE

Cyathea, TAX., 8421

POLYPODIACEAE

Adiantum, DIST., (†) 7048;
 TAX., 1097, 8421
 Asplenium, DIST., 1102; TAX., 1097, 6376, 8421
 Athyrium, TAX., 1097, 8421
 Blechnum, TAX., 1097, 4757, 8421
 Bolbitis, TAX., 1101, 8421
 Calymmodon, TAX., 8421
 Campium, TAX., 8421
 Cheilanthes, TAX., 1097
 Cyclocladum, TAX., 4758

Cyclophorus, TAX., 1097
 Diplazium, TAX., 1097, 2816
 Dryopteris, MORPH., 1099; TAX., 1097, 1110, 2817, 2828A, 4758, 6376, 8421, 8423, 8424, 11850
 NOTHOPTERANEUM, N.
 SUBG., 2819
 Elaphoglossum, TAX., 1097, 8421

Grammitis, TAX., 8421
 Hymenolepis, TAX., 8421
 Lindsaea, TAX., 1097, 8421
 Lindsaya, TAX., 2818, 8421
 Microsorium, TAX., 8421
 Nephrolepis, DIST., 8423
 Oleandra, TAX., 1097
 Platycerium, TAX., 1097
 Polypodium, TAX., 1097, 2828A, 4757
 Polystichum, TAX., 8421
 Pteridium, MORPH., 17552
 Pteris, TAX., 1097
 Pycnodoria, TAX., 6376
 Sphenomeris, TAX., 8421
 Stenoloma, TAX., 8421
 Struthiopteris, TAX., 4757
 Tarachia, TAX., 2816
 Tectaria, TAX., 1097
 Thelypteris, TAX., 6376
 Woodsia, DIST., 1096

GLEICHENIACEAE
 Dicranopteris, TAX., 4757
 Gleichenia, TAX., 1097

SCHIZAEACEAE
 PHYL., 8372, (†) 15430;
 TAX., (†) 15430
 Dactylothea, MORPH., (Cb)
 8372, (†) 15430; DIST., (†) 15430
 Senftenbergia, MORPH., (Cb)
 8372; PHYL., TAX., (†) 15430

OSMUNDACEAE
 Osmunda, CYT., 6375

MARSILEACEAE

Regnellidium, MORPH., 10164

SALVINIACEAE

Azolla, DIST., 1100; MORPH., 4759; TAX., (Pi) 8422
 Salvinia, CYT., L. H., 17510;
 DIST., 1100

ARTHROPHYTA

CALAMARIALES

ASTEROCALAMITACEAE
 Asterocalamites, DIST., (Cb)
 3235

CALAMARIACEAE
 Calamites, MORPH., TAX., (Cb)
 4726

EQUISETALES
 EQUISETACEAE
 Equisetum, DIST., 1107; MORPH., PHYL., 17562; TAX., 4755, 8422

LEPIDOPHYTA

LEPIDODENDRALES
 LEPIDODENDRACEAE
 Knorria, DIST., (D) 13716

BOTHRODENDRACEAE
 Cyclostigma, TAX., (D) 10097

STIGILLARIACEAE
 Archaeosigillaria, DIST., (D)
 13716

INCERTAE SEDIS
 (In Lepidodendrales)
 PROLEPIDODENDRON (†),
 (D) 13716
 Protolpidodendron, DIST., (D)
 13716

LYCOPODIALES
 LYCOPODIACEAE
 Lycopodium, MORPH., 6374;
 TAX., 2828A

PSILOTALES
 PSILOTAACEAE
 Psilotum, MORPH., TAX., 13784

ISOETALES
ISOETACEAE
Isoetes, CYT., 7109; TAX., 17507
Isoetes, DIST., TAX., (K)
18717
Pseudobornia, TAX., (D) 10097

INCERTAE SEDIS
(In Lepidophyta)
Helionella, TAX., (D) 10097

PSILOPHYTA
PSILOPHYTALES
MORPH., PHYL., (†) 2785
Arachnoxylon, DIST., MORPH.,
TAX., (†) 2785
Barinophyton, DIST., TAX., (D)
18716
Hostimella, DIST., TAX., (D)
18716

Psilophyton, DIST., (D) 3235,
(D) 13716
Schizopodium, DIST., TAX., (†)
2785

INCERTAE SEDIS
(In Pteridophyta)
Aphlebia, DIST., TAX., (†) 2786
Aphyllaria, DIST., TAX., (D)
13716

Callistopteris, TAX., 8421
Calymmatotheca, TAX., (Ob)
8368
Chiropteris, DIST., TAX., (Pr)
15432
Diplostachyum, TAX., 6376
Macroglena, TAX., 8421
Meecodium, TAX., 8421
Sphenopteridium, TAX., (D)
10097
Thursophyton, DIST., (D) 3235

SPERMATOPHYTA

BIBL., 1691; HIST., 17556, 17557, 17560; PHYL., 2785, 2905, 4722; TAX., 2820, 2821

GYMNASPERMAE
TAX., 2823

PTERIDOSPERMO-
PHYTA
(CYCADOPHYTALES)
L. H., MORPH., 8369
Adiantites, DIST., TAX., (†) 2786
Archaeopteris, DIST., TAX., (D)
18716
Callipteris, DIST., TAX., (Pr)
15432
Cardiophyllum, L. H., (Ob)
10095
Conostoma, MORPH., (†) 15431
Crossothea, MORPH., 8369
Kalymma, TAX., (Ob) 8368
Lagenospermum, TAX., (Ob)
10095
Medullosa, HIST., TAX., 10098
ANGLOPOTA, N. SUBG.,
10098
Pachytista, MORPH., (†) 15431
Pterispermotrobus, TAX., (†)
8369
Sarmatopsis, TAX., (Ob) 8368
Stenomylon, TAX., (Ob) 8368
TETRASTICHIA, (Ob) 8370

Pinus, DIST., 10352, (N) 13721,
15485; HIST., 2917, 8446,
8448, 15517; MORPH.,
1812, 2911, 6446, 15485;
PHYL., 2825; TAX., 2827,
4800, 15485, (N) 17475,
17513
Pseudotsuga, MORPH., 2828;
TAX., 2823, 11853A, (N)
17475
Sciadopitys, TAX., (E) 4724
Sequoia, DIST., (†) 13715, (N)
13721; EMB., 6440, 10163,
17511; HIST., 17511;
PHYL., 10163; TAX., 10163,
17511
SEQUIADENDRON, 17511
Taxodium, DIST., (N) 18721;
MORPH., 6443; TAX., 6381,
15486
Thuja, TAX., 15486

INCERTAE SEDIS
(In Coniferales)
Protophyllocladus, TAX., (K)
17476

GNETALES
GNETACEAE
PHYL., TAX., 1169
Ephedra, DIST., (†) 7048

Avena, CYT., 5292, 16159;
MORPH., 6445; TAX., 1158
Brachiaria, TAX., 15483
Bromus, TAX., 1158
Cenchrus, MORPH., 17514; TAX.,
17537
Cleistogenes, TAX., 2835
Ctenium, MORPH., TAX., 13745
Cymbopogon, TAX., 8427
Cynosurus, MORPH., 17514
Danthonia, TAX., 1158
Deschampsia, CYT., DIST., 14345
Deyeuxia, TAX., 8427
Digitaria, TAX., 15489
Ehrharta, TAX., 15483
Elymus, TAX., 1158
Eragrostis, TAX., 15489
Festuca, DIST., 1102; TAX.,
1102, 8444
Helictotrichon, TAX., 8427
Hordeum, TAX., 2926
Hyparrhenia, TAX., 2828, 8427
Imperata, TAX., 6395
Ischaemum, TAX., 8427
Jouvea, MORPH., PHYL., 10123
Loudetia, TAX., 2828
Melinis, TAX., 15483
Microstegium, TAX., 8427,
15483
Muhlenbergia, TAX., 1158
Nephelochloa, MORPH., 17514
Panicum, CYT., 1703; MORPH.,
17514; TAX., 1158, 6484,
15483, 17516
Paspalum, TAX., 15489
Pennisetum, MORPH., 17514;
TAX., 6484
Periballia, MORPH., 17514
Phragmites, DIST., (†) 7048
Poa, DIST., 13747; TAX., 1158,
8426, 13747
Puccinellia, TAX., 2835
Rottboellia, TAX., 8427
Sasa, TAX., 6387, 6388, 6389
Schizachyrium, TAX., 2828,
8427
Sclerostachya, TAX., 8427
Sesale, CYT., 42, 14348, 16154
Setaria, CYT., 1703; MORPH.,
17514; TAX., 2828, 6484,
8426
Sorghastrum, TAX., 2828
Sorghum, TAX., 6484, 10120
Spartina, MORPH., 11929
Sphenopholis, TAX., 1158
Stipa, TAX., 1158, 2835
Themeda, TAX., 8427
Tricholaena, MORPH., 11916
Trisetum, TAX., 1158
Tristachya, TAX., 11865
Triticum, CYT., 42, 1698, 7098,
7099, 7130, 12508, 12509,
13744, 16154, 16156,
16159; MORPH., 13744;
TAX., 13744
Zea, CYT., 1698, 8909, 10717;
MORPH., 6450

PALMALES (PRINCIPES)
PALMACEAE (PALMAE)
TAX., (E) 4724
Actinophloeus, TAX., 11860
Areca, TAX., 10121, 15487
Astrocaryum, TAX., 13746
Borassus, TAX., 6383
Calamus, TAX., 1113
Calyptrocalyx, TAX., 10121
Chrysalidocarpus, DIST., 11861
Coccothrinax, TAX., 11862
Cyrtostachys, TAX., 11864
Erythea, MORPH., 13781
Geonoma, TAX., 11863
Gronophyllum, TAX., 11864,
15488
Gulubia, TAX., 10121
Heterospatha, TAX., 10121
Hydiastele, TAX., 11864
Hyospatha, TAX., 2331
Hyphaene, TAX., 6383
Korthalsia, TAX., 11864
Leptophoenix, TAX., 15488
Licuala, TAX., 11864
Livistona, TAX., 11864
Nengella, TAX., 11864
Orania, TAX., 10121, 11864
PARAGULUBIA, 10121
Paralissopadix, TAX., 11864
ATOPOCAEUS, N. SUBG.,
11864
Pinanga, TAX., 15487
PSEUDOPINANGA, 15487
Ptychococcus, TAX., 11864
STOLIDOTOCOCUS, -N.
SUBG., 11864
Ptychosperma, TAX., 11860
REHDEROPHOENIX, 10121
STRONGYLOCARPUM, 10121

CYCADOPHYTA
CYCADALES
CYCADACEAE
Jycas, MORPH., 11917; TAX.,
1111

CONIFEROPHYTA
CORDAITALES
L. H., MORPH., 8369
Jallixylon, DIST., (D) 18716
JAULOXYLON, (K) 18716

CONIFERALES
PHYL., TAX., 1169

TAXACEAE
Jacrydium, TAX., 15484
Podocarpus, TAX., 15484
Jaxegothaea, EMB., 11915,
11921; MORPH., 11921;
PHYL., 11915; TAX., 15484

PINACEAE
HIST., 15517; Abieteneae,
PHYL., 1761
Abies, MORPH., 6446; TAX.,
15486
Actinostrobus, EMB., 1164
Araucaria, TAX., 15484
Callitris, DIST., (N) 13721
Oedrus, TAX., 6378
Chamaecyparis, DIST., 1283
Cupressinoxylon, DIST., (†)
13715
Cupressus, TAX., (N) 17475
Fitzyra, TAX., 15484
Glyptostrobus, DIST., (N) 13721
Juniperus, CYT., MORPH., 15523;
EMB., 10165; TAX., 8425
Keteleeria, TAX., (E) 4724
Larix, HIST., 13785
Libocedrus, DIST., (N) 18721;
TAX., 15484
Picea, MORPH., 1112; 2826,
3030, 6446, 6447; PHYL.,
2826; TAX., (N) 4725,
10118, 15486
Pilgerodendron, TAX., 15484

ANGIOSPERMAE
CYT., 50; PHYL., 4810,
11919; TAX., 11855

MONOCOTYLE-
DONES
MORPH., 17514

PANDANALES
TYPHACEAE
Typha, MORPH., 4766

PANDANACEAE
Freycinetia, TAX., 11868
Pandanus, DIST., 1114, 1116;
TAX., 1116, 11868

NAJADALES (HELOBIAE)
POTAMOGETONACEAE
Potamogeton, DIST., 6432; TAX.,
2833

HYDROCHARITACEAE
Boottia, TAX., 6391
Vallisneria, MORPH., TAX., 10168

TRIURIDALES
TRIURIDACEAE
Sciaphila, TAX., 8426

GRAMINALES
(GLUMIFLORAE)
PHYL., TAX., 1121

POACEAE
(GRAMINEAE)
CYT., 5290, 10718; DIST.,
15490; MORPH., 6450,
15526; PHYL., 5290; TAX.,
6434, 11857, 11866, 15490
Acroceras, TAX., 8427
Agropyron, TAX., 1120, 2835,
10122
Agrostis, TAX., 1158, 4800
Aira, CYT., DIST., 14345
Alloteropsis, TAX., 15489
Andropogon, TAX., 2828
Aristida, DIST., (†) 7048
Arundinaria, TAX., 6387
Arundinella, TAX., 8427

CYPERACEAE
CYT., 7106, 17563; MORPH.,
17563
Capitularia, TAX., 11873
Carex, CYT., EMB., MORPH.,
6448; DIST., 17515; TAX.,
1119, 6393, 6394, 8425,
11869, 11870, 11871
Cladium, TAX., 8428
Cyperus, TAX., 6390, 8426
Fimbristylis, TAX., 1118, 11871
Hypolytrum, TAX., 11873
Lepidosperma, TAX., 8428
Mapania, TAX., 11873
Pycnos, TAX., 2832
Rynchospora, TAX., 2828A
Scirpus, TAX., 8426

CYCLANTHALES (SYNANTHAE)
CYCLANTHACEAE
Cyclanthera, CYT., 12508

ARALE (SPATHIFLORAE)
ARACEAE
Ambrosia, TAX., 13762
Anthurium, TAX., 2827A, 2828A
Calamus, TAX., 11864
Dieffenbachia, TAX., 2827A
Remusatia, MORPH., 4768

LEMNACEAE
Wolfiella, MORPH., 2836

XYRIDALES (FARINOSAE)
CENTROLEPIDACEAE
Centrolepis, DIST., 1115

XYRIDACEAE
Xyris, MORPH., 2839

ERIOCAULACEAE
Eriocaulon, TAX., 4769
Lachnocaulon, TAX., 4769
Paepalanthus, TAX., 4769
Syngonanthus, TAX., 4769

BROMELEACEAE
TAX., 2841
Catopsis, TAX., 2841
Hechtia, TAX., 2841
Pitcairnia, TAX., 2834, 11867
Thecophyllum, TAX., 2828A
Tillandsia, TAX., 2828A, 2841
Vriesia, TAX., 2841
Tradescantia, CYT., 1702, 1706,
1710, 1711, 1712, 7100,
7108, 10715

LILIALES (LILIIFLORAE)
JUNCACEAE
CYT., MORPH., 17563
Juncus, TAX., 1158

LILIACEAE
 Allium, CYT., 1698, 1702, 10721; TAX., 1158, 4797B, 6384
 Aloe, CYT., 12508
 Brodiaea, TAX., 4763, 6384, 6386
 Calochortus, CYT., TAX., 8906
 Camassia, TAX., 1158
 Chlorogalum, TAX., 4763
 Chlorophytum, MORPH., 1117
 Dichelostemma, TAX., 6386
 Erythronium, EMB., 15518; TAX., 8442
 Fritillaria, TAX., 6384
 Hyacinthus, CYT., 1709
 Leucocoryne, MORPH., PHYL., 17554
 Lillium, CYT., 1699, 7093, 7104, 14346
 Nolina, DIST., (†) 7048
 Ornithogalum, TAX., 10119
 Paris, CYT., 5287, 7095
 Ruscus, MORPH., 11924
 Smilax, TAX., (N) 17479
 Trillium, CYT., 1707, 1708, 1714, 7096
 Tritelia, TAX., 6386
 Urginea, EMB., MORPH., 11912
 Willrussellia, TAX., 11867
 Yucca, DIST., (†) 7048; MORPH., 6441

AMARYLLIDACEAE
 TAX., 13742
 Agave, TAX., 13748
 Alstroemeria, TAX., 13749
 Crinum, CYT., 3451; TAX., 6429
 Hippeastrum, CYT., 3451
 Phaedranassa, MORPH., 4772

DIOSCOREACEAE
 Cryptantha, TAX., 1158

IRIDACEAE
 Crocus, CYT., 5288
 Gladiolus, TAX., 15483
 Iris, MORPH., 4771; TAX., 4771, 11854

ORCHIDALES (MICROSPERMAE)
ORCHIDACEAE
 Acianthus, TAX., 2838
 Centranthera, TAX., 11895
 Cheirostylis, TAX., 8426
 Epipogium, TAX., 11872
 Goodyera, TAX., 1158
 Habenaria, TAX., 2842
HINTONELLA, 2830
 Lepanthes, TAX., 2828A, 2840
 Orchis, CYT., 12504; TAX., 2842, 4767
 Paphiopedilum, CYT., 10714
 Sarcochilus, TAX., 6392
 Spiranthes, TAX., 1158

DICOTYLEDONES

PHYL., 4723
PIPERALES
PIPERACEAE
 Peperomia, TAX., 2827A, 2828A, 2865, 6429, 6437
 Piper, TAX., 2827A, 2828A, 6429, 6437

SALICALES
SALICACEAE
 Populus, CYT., 5291; DIST., (†) 7043; MORPH., 11853; TAX., 3017, (N) 17475, (N) 17479
 Salix, MORPH., 1166, 1169, 17559; TAX., 1158, 1169, 2845, 6381

MYRICALES
MYRICACEAE
 Myrica, TAX., (E) 4724

JUGLANDALES
JUGLANDACEAE
 HIST. PHYL., TAX., 17527
 Carya, TAX., 6381
 Juglans, TAX., (N) 4725, (N) 17475

FAGALES
BETULACEAE
 Betula, DIST., 10161, TAX., 1124
 Corylus, MORPH., 11853

FAGACEAE
 Castanopsis, TAX., 1125
 Fagus, DIST., 10159
 Lithocarpus, TAX., 1125
 Quercus, L. H., 5052, 8648; TAX., 2828A, 2879, 6381, 8444, 17543, (N) 17575

URTICALES
ULMACEAE
 Ulmus, MORPH., 11853; TAX., 1133, (N) 10099, 15486

MORACEAE
 MORPH., TAX., 8433
 Artocarpus, TAX., 15505
 Cannabis, HIST., 10172
 Coussapoa, TAX., 2827A
 Ficus, TAX., 4780
 Morus, TAX., 6409

URTICACEAE
 Laportea, TAX., 15505
 Pilea, TAX., 6437

PROTEALES
PROTEACEAE
 Banksia, TAX., 11883
 Embothrium, TAX., 11883
 Grevillea, TAX., 11883
 Helicia, TAX., 11883, 15505
 Stenocarpus, TAX., 11883

SANTALALES
LORANTHACEAE
 Arceuthobium, TAX., 1158
 Loranthus, TAX., 10151
 Phoradendron, TAX., 2828A
 Phthirusa, TAX., 2827A
 Razoumofskya, TAX., 1158

SANTALACEAE
 TAX., 8438
 Exocarpus, TAX., 8438
 Santalum, TAX., 13757

POLYGONALES
POLYGONACEAE
 MORPH., 8450
 Eriogonum, TAX., 2860, 6411, 8442
 Fagopyrum, HIST., 10172
 Muehlenbeckia, DIST., 4787
 Oxygonum, TAX., 2828
 Polygonum, L. H., 12223; TAX., 1158, 8426
 Rheum, MORPH., 4873
 Rumex, TAX., 8444

CHENOPODIALES (CENTROSPERMAE)
CHENOPODIACEAE
 Amoreuxia, TAX., 15506
 Atriplex, DIST., (†) 7048; TAX., 4763
 Beta, HIST., 2908; MORPH., 6442, 6488
 Salicornia, CYT., 12506
 Spinacia, CYT., 16150

AMARANTACEAE
 TAX., 1144
 Iresine, TAX., 6437
ROBYNSIELLA, 1144
 Tildestromia, TAX., 11886
NYCTAGINACEAE
 Boerhaavia, EMB., MORPH., 1171
AIZOACEAE
 Cheiridopsis, TAX., 6408
 Dorotheanthus, TAX., 1126
 Mesembryanthemum, TAX., 1126
 Tetragonia, TAX., 11894

CARYOPHYLLACEAE
 Cerastium, TAX., 8444
 Cordia, TAX., 2882
 Dianthus, TAX., 8444
 Drymaria, MORPH., 1139
 Herniaria, MORPH., 2914
 Lychnis, MORPH., TAX., 13779
 Melandrium, CYT., 10716
 Silene, CYT., 10189, 10140, 10141, 10142, 10143; MORPH., 10139, 10140, 10141, 10142, 10143

RANALES
 EMB., PHYL., 4809

RANUNCULACEAE
 Aconitum, CYT., 5285; TAX., 13776
 Aquilegia, CYT., 5293
 Clematis, TAX., 15486
 Delphinium, HIST., 10172; TAX., 1158, 6401, 10158, 11874

Nigella, CYT., 10714
Paeconia, CYT., 10714
Ranunculus, CYT., 5286;
MORPH., 6449; TAX., 17517
Thalictrum, TAX., 1158, 2828A

LARDIZABALACEAE
 Holboellia, TAX., 2861
 Berberis, TAX., 2865
 Mahonia, TAX., 2861
 Podophyllum, TAX., 2861

MENISPERMACEAE
 TAX., 13755
 Abuta, TAX., 2865, 10129
 Cissampelos, TAX., 2861
 Coscinum, TAX., 2861
 Cyclea, TAX., 2861, 15505
 Desmonema, TAX., 15488
 Dischiphania, TAX., 10129
 Odontocarya, TAX., 10129
PRIDANIA, 2861
 Sciadotenia, TAX., 2865
 Stephania, TAX., 2861
 Tinospora, EMB., MORPH., TAX., 11920

MAGNOLIACEAE
 Magnolia, TAX., (E) 4724, 6429, 15486

ANNONACEAE
 TAX., 13755
 Artabotrys, TAX., 15488
 Asteranthe, TAX., 15483
 Drepananthus, TAX., 15505
 Fissistiga, TAX., 15505
 Gonothalamus, TAX., 8430
 Guatteria, TAX., 2865
LETTOWIANTHUS, 15483
OPHYRYPETALUM, 15483
 Orophea, TAX., 13755
 Oxymitra, TAX., 8430
 Pogonia, TAX., 15483
 Rauwenhoffia, TAX., 13755
 Unonopsis, TAX., 2865
 Uvaria, TAX., 15483
 Xylopia, TAX., 2865, 15483

MYRISTICACEAE
 Myristica, TAX., 4780

MONIMACEAE
 Siparuna, TAX., 2865

LAURACEAE
 TAX., 1180
 Aniba, TAX., 2865
 Beilschmiedia, TAX., 2865
 Cinnamomum, TAX., (E) 4724, 11876
 Cryptocarya, TAX., 6431
 Laurus, DIST., (K) 17476
 Neocinnamomum, TAX., 11876
 Persea, MORPH., 11927; TAX., 6437
 Sassafras, DIST., (K) 17476

HERNANDIACEAE
 Hernandia, TAX., 6437

PAPAVERALES (RHOEADALES)

PAPAVERACEAE
 MORPH., 15521
 Argemone, MORPH., 15521
 Boccia, TAX., 2865
 Corydalis, MORPH., 10170
 Platysmon, MORPH., 11884
 Pteridophyllum, MORPH., 2906, 11884

BRASSICACEAE
 Alyssum, TAX., 8444
 Cardamine, TAX., 6381, 13776
 Cremonolobus, TAX., 2865
 Diceratella, TAX., 15511
 Englercharis, TAX., 2865
GLAUOCARPUM, 2878
 Lepidium, MORPH., 4813
 Lesquerella, CYT., 13760; N. SP., TAX., 13760
 Lepidium, DIST., 17544
 Raphanus, CYT., 1698
 Rorippa, TAX., 2865
 Selenia, TAX., 2885
 Streptanthus, TAX., 2871
 Turritis, TAX., 8444

CAPPARIDACEAE
 Capparis, MORPH., 10132; TAX., 6437
 Cleome, TAX., 2865
 Gynandropsis, CYT., 3449
 Maerua, TAX., 15483
 Podandrogynae, TAX., 2865
 Polanisia, CYT., 3449

ROSALES
PODOSTEMONACEAE
 TAX., 2873
 Tristicha, TAX., 10149

CRASSULACEAE
 Altamiranoa, TAX., 2887
 Cotyledon, TAX., 6424
 Crassula, TAX., 2865, 6417, 10149
 Villadia, TAX., 2887

SAXIFRAGACEAE
 Broussaisia, TAX., 15502
 Deutzia, TAX., 8426
 Hydrangea, TAX., 15486
 Mitella, TAX., 1158
 Ribes, TAX., 1158

BRUNELLIACEAE
 Brunellia, TAX., 2865

CUNONIACEAE
 Weinmannia, TAX., 2865, 6431

BRUNIACEAE
 Baeckea, TAX., 11892

HAMAMELIDACEAE
 Liquidambar, TAX., 15486

PLATANACEAE
 Platanus, MORPH., 11853

ROSACEAE
 Alchemilla, TAX., 1140
 Amelanchier, TAX., 6381
 Aphanes, TAX., 2865
 Cotoneaster, TAX., 1141, 10138, 15486
 Eupatorium, TAX., 6437
 Hesperomeles, TAX., 2865
 Hirtella, TAX., 2865
 Horkelia, TAX., 1158, 4784
 Ivesia, TAX., 4784
 Lachenilla, TAX., 1140
 Licania, TAX., 2865
 Lyonothamnus, TAX., 2848
 Malus, CYT., 8910; TAX., 15486
 Margyricarpus, TAX., 2865
 Melanobatus, DIST., 10272
 Farastemon, TAX., 15486
 Photinia, TAX., 15486
 Potentilla, TAX., 2865, 4784, 8442, 15486

PRUNUS, CYT., 16153; DIST., (†) 7048; L.H., 10880; MORPH., 15525; TAX., 15486, (N) 17475, (N) 17478, (N) 17479
 Pyrus, CYT., 2997, 8910, 10230; MORPH., 2997, 10230, 11928; TAX., 15486
 Rosa, MORPH., 2908; TAX., 1158, 8442, 15486
 Rubus, TAX., 1158, 8444
 Sorbaronia, TAX., 8434, 8435, 15486
 Sorbus, TAX., 8435, 8442, 15486
 Spiraea, TAX., 15486

CONNARACEAE
 Rourea, TAX., 2865

MIMOSACEAE
(LEGUMINOSAE, pars)
 CYT., PHYL., 3450; TAX., 3450, 17534
 Albizzia, TAX., 1123
 Calliandra, TAX., 2828A
 Inga, TAX., 6437
 Prosopis, TAX., (M) 17475

CAESALPINIACEAE
(LEGUMINOSAE, pars)
 CYT., PHYL., 3450; TAX., 3450, 17531
 Bauhinia, HIST., 8449
 Brownea, TAX., 2827A
 Caesalpinia, TAX., 6398
 Cassia, DIST., (†) 7048
LEMUROPSIS, 11877

FABACEAE
(LEGUMINOSAE, pars)
 CYT., PHYL., 3450; TAX., 3450, 10131, 11857, 17534
 Astragalus, TAX., 8442, 11894
 Baptisia, TAX., 17531
 Cicer, CYT., 12505
 Coumarouna, TAX., 2856
 Crotalaria, MORPH., 4804
 Derris, DIST., 10466; L. H., 12235
 Desmodium, TAX., 2828A
 Dorycnium, TAX., 8444
 Erythrina, TAX., 1123, 11890
 Glycyrrhizopsis, TAX., 10119

DICOTYLEDONES (Continued)

Laburnum, DIST., TAX., 10157
 Lathyrus, TAX., 1158
 Lupinus, TAX., 1158, 4768,
 4781, 6400, 6402, 10130,
 11854
 Phaseolus, CYT., 8909; MORPH.,
 6451; TAX., 18751
 Pisum, CYT., 49, 1704, 8909
 Pterocarpus, TAX., 11873A
 Rhynchosia, TAX., 2828A, 2870,
 15505
 Robinia, DIST., 6538
 Sarothamnus, TAX., 1143
 Taralea, TAX., 2856
 Tephrosia, L. H., 12223
 Trifolium, CYT., 49; TAX., 1158
 Vicia, CYT., 49, 1702, 10720,
 10721
 Vigna, TAX., 2870

GERANIALES
 GERANIACEAE
 Geranium, TAX., 1158
 TROPAEOLACEAE
 Tropaeolum, MORPH., 6451,
 15522

LINACEAE
 Linum, TAX., 1158
 ZYGOPHYLLACEAE
 Larrea, DIST., 7048
 Tribulus, MORPH., 6549

RUTACEAE
 TAX., 4783
 Aurantiaceae, MORPH.,
 PHYL., TAX., 4814
 BURKILLANTHUS, 13761
 Citrus, TAX., 4783
 OLYMENIA, 13761
 Dutaillaea, TAX., 4783
 Evodia, TAX., 6431, 15505
 Melicope, TAX., 4783
 Pelea, TAX., 4783
 Pleiospermium, TAX., 13761
 Vepria, TAX., 2828
 Zanthoxylon, L. H., 12223; TAX.,
 2828A, 8426
 Zieridium, TAX., 4783

SIMARUBACEAE
 TAX., 8434
 Ailanthus, MORPH., 6444
 Pteranania, TAX., 2828A
 BURSERACEAE
 TAX., 8434
 Bursera, TAX., 11879

MELIACEAE
 Azadirachta, DIST., 10282
 Dysoxylum, TAX., 13765
 Vavaya, TAX., 18768

EUPHORBACEAE
 MORPH., 8433; TAX., 1132,
 8433
 Bernardia, TAX., 17535
 Glauxylon, TAX., 13763
 Eleistanthus, TAX., 15505
 Oncoveiba, TAX., 2885
 Oryctes, TAX., 2885
 Glaeophorbia, TAX., 1127
 Euphorbia, EMB., 2913, 10128,
 13756; TAX., 1127
 Iaboa, TAX., 2885
 Amphalea, TAX., 15483
 Phyllanthus, TAX., 1132
 ticheria, TAX., 2885
 tichius, HIST., 10172
 Sphaerostylis, TAX., 15505

SAPINDALES
 Ilicaceae, TAX., 1128
 BUXACEAE
 Sarcococca, TAX., 11886

ANACARDIACEAE
 Actinocheita, TAX., 15497
 Rhus, TAX., 11880, 15497, (N)
 17475

AQUIFOLIACEAE
 Ilex, TAX., 2828A, 11893, (N)
 17479

CELASTRACEAE
 Celastrus, TAX., 15504
 Glossopetalum, TAX., 1158
 Gymnosporia, TAX., 15504
 Lophopetalum, TAX., 15504
 Maytenus, TAX., 4785, 15504
 Myginda, TAX., 15504
 Solenospermum, TAX., 15504

HIPPOCRATEACEAE
 Hippocratea, EMB., TAX., 4806
 Salacia, EMB., 4806; TAX., 4806,
 8439

ACERACEAE
 Acer, DIST., 6418A; L. H., 2804,
 2805; MORPH., PHYL., 4776

SAPINDACEAE
 Cardiospermum, EMB., TAX.,
 4806
 Cupaniopsis, TAX., 6431
 Gelonium, TAX., 2843
 Lychnodiscus, TAX., 2843
 Melanodiscus, TAX., 2843
 Paullinia, TAX., 6437
 Phalodiscus, TAX., 2843
 Placodiscus, TAX., 2843
 Sapindus, EMB., TAX., 4806;
 TAX., (N) 17475

SABIACEAE
 Meliosma, TAX., 15505, (E)
 17477

BALSAMINACEAE
 Impatiens, CYT., 45; MORPH.,
 6451

RHAMNALES
 RHAMNACEAE
 Ceanothus, TAX., 6412, (N)
 17475, 17532
 Colletia, TAX., 10152
 Condalia, TAX., 11886
 Gouania, TAX., 2858
 Rhamnus, TAX., 6419

VITACEAE
 MORPH., PHYL., (†) 2733
 Ampelocissus, MORPH., 2733;
 TAX., 15483
 Cissus, TAX., 2828A, 15483
 Tetrastigma, MORPH., 2733;
 TAX., (E) 4724
 Vitis, MORPH., (†) 2733

MALVALES
 MORPH., TAX., 8438
 ELAEOCARPACEAE
 Sloanea, TAX., 6437

TILIACEAE
 Brownlowia, TAX., 15498
 Grewia, TAX., 15498
 Microcos, TAX., 15505
 MORTONIODENDRON, 2885
 Tilia, MORPH., 11853
 Trichospermum, TAX., 15498

MALVACEAE
 CYT., 1700; TAX., 6428
 Althaea, HIST., 4807
 Gossypium, CYT., 11765, 17551;
 TAX., 6492
 Malvastrum, TAX., 11854
 Periptera, TAX., 10126
 Prestonia, TAX., 2867
 Sphaeralcea, DIST., (†) 7048;
 TAX., 1158

BOMBACEAE
 Ceiba, MORPH., 4811

VIOLAE (PARIETALES)
 DILLENTACEAE
 Clethra, TAX., 2882
 Saurauia, TAX., 2861

EUCRYPHIACEAE
 DIST., MORPH., TAX., 10125

OCHNACEAE
 Sauvagesia, MORPH., 1139

THEACEAE
 Adinandra, TAX., 8426
 Eurya, TAX., 6429

HYPERICACEAE
 (GUTTIFERAE, pars)
 Hypericum, TAX., 8436, 8444

CLUSIACEAE
 (GUTTIFERAE, pars)
 Tovomitia, TAX., 2827A

ELATINACEAE
 Elatine, TAX., 2886

FRANKENIACEAE
 Frankenia, TAX., 11886

CISTACEAE
 Helianthemum, TAX., 17538

VIOLACEAE
 Viola, TAX., 1158, 2844, 4800,
 13754, 17540

FLACOUTIACEAE
 TAX., 2881
 Banara, TAX., 2881
 Hasseltia, TAX., 2881
 HASSELTIOPSIS, 2881
 Neosprucea, 2881
 Prockia, TAX., 2881

LOASACEAE
 Mentzelia, TAX., 1158

DATISCEAE
 Octomeles, DIST., 3023
 Tetrameles, DIST., 3023

BEGONIACEAE
 CYT., 41
 Begonia, TAX., 2828A, 6429

OPUNTIALES
 Rebutia, TAX., 6396

CACTACEAE
 TAX., 8440
 Echinocereus, TAX., 1187
 Hylocereus, MORPH., 13787
 Mammillaria, TAX., 2862
 Opuntia, DIST., (†) 7048
 Rebutia, TAX., 6397
 Rhipsalis, TAX., 6437

MYRTALES (MYRTIFLORAE)
 LYTHRACEAE
 Cuphea, MORPH., 1139
 Parsonia, TAX., 13768
 Rhynchosylos, TAX., 10155

COMBRETACEAE
 Combretum, TAX., 2828
 MYRTACEAE
 Eucalyptus, TAX., 17518
 Eugenia, TAX., 2828A, 4785,
 6437
 KJELLBERGIODENDRON,
 10127
 Metrosideros, TAX., 6431
 Pareugenia, TAX., 6431
 Syzygium, TAX., 2828, 6431,
 11892

MELASTOMATACEAE
 Anplectrum, TAX., 15505
 Astronidium, TAX., 6431
 Blakea, TAX., 2827A, 2828A,
 6437, 17526
 Blastus, TAX., 15505
 Chaetolepis, TAX., 2882
 Oldemia, TAX., 2882, 17526
 Conostegia, TAX., 2827A, 2882,
 17526
 Medinilla, TAX., 6431, 15505
 Melastoma, TAX., 15505
 Miconia, TAX., 2827A, 2882,
 17526
 Ossaea, TAX., 2882
 Tibouchina, TAX., 17525, 17526
 Topoeba, TAX., 2882
 Tristemma, TAX., 2828

ONAGRACEAE
 (OENOTHERACEAE)
 Epilobium, TAX., 1158, 8442
 Fuchsia, TAX., 2827A, 11887
 Ludvigia, TAX., 6381
 Oenothera, CYT., 40, 7103,
 10719; TAX., 6421, 6422
 Onagra, CYT., 7103

HYDROCARYACEAE
 Trapa, TAX., (E) 10096

HALORRHAGIDACEAE
 Limociera, TAX., 15508

UMBELLALES (UMBELLIFLORAE)

ARALIACEAE
 Boerlagiodendron, TAX., 13768
 Horsfieldia, TAX., 4780, 15505
 Oreopanax, TAX., (N) 10099
 Sciadophyllum, TAX., 6437
 Tieghemopanax, TAX., 13768

APIACEAE
 (UMBELLIFLORAE)
 CHLAENOSCIADIUM, 1185
 Cogswellia, TAX., 1158
 Daucus, MORPH., 10167
 Eremocarpus, TAX., 2888
 Ligusticum, TAX., 1158
 Linderia, TAX., 15486
 Lomatium, TAX., 1158
 Marathrum, TAX., 6429
 PLEUOSPERMOPSIS, 1185
 Trachydium, TAX., 1136
 Velaea, TAX., 10136

CORNACEAE
 PHYL., 4724
 Cornus, TAX., 1158
 Mastixia, TAX., (E) 4724
 Nyssa, TAX., (E) 4724
 RETINOMASTIXIA, (E) 4724
 XYLOMASTIXIA, (E) 4724

ERICALES
 PYROLACEAE
 Allotropa, MORPH., 2858

ERICACEAE
 TAX., 8438, 11882
 Agapetes, TAX., 11882
 Agauria, TAX., 4790
 Anthopteris, TAX., 10153
 Arctostaphylos, TAX., (N)
 17475
 Calluna, DIST., MORPH., 2909
 Dimorphanthus, TAX., 11882
 Eubotrys, TAX., 15507
 Gaultheria, TAX., 4778, 15507
 Leucothoe, TAX., 15507
 Pelleginia, TAX., 15507
 Pernettia, TAX., 4778, 15507
 Themistoclesia, TAX., 10153
 Vaccinium, TAX., 2882, 6426,
 10153, 10154

DIAPENSIACEAE
 Diapensia, CYT., PHYL., 8905
 Galax, CYT., PHYL., 8905

PRIMULALES
 MYRSINACEAE
 Ardisia, TAX., 2882, 6429,
 15510

PRIMULACEAE
 Anagallis, TAX., 13759
 Dodecatheon, TAX., 1158
 PLUMBAGINACEAE
 TAX., 2875
 Gonolimon, TAX., 8444
 Plumbagella, MORPH., PHYL.,
 17553

EBENALES
 SAPOTACEAE
 Bumelia, TAX., 2882
 Burekella, TAX., 6431
 Dipholis, TAX., 2882
 Mimuspops, TAX., 2828
 Neslostoma, TAX., 1131
 Tridestomeston, DIST., TAX.,
 1138
 Vitellaria, TAX., 2827A

EBENACEAE
 Diospyros, TAX., 2858, 8431,
 17524
 Maba, TAX., 17524

STYRACACEAE
 Styxax, EMB., MORPH., PHYL.,
 4805

SYMPLOCACEAE
 Symplocos, TAX., 2882, (E)
 4724

GENTIANALES (CONTORTAE)
 OLEACEAE
 Fraxinus, DIST., (†) 7048;
 MORPH., 10145, TAX.,
 2828A, 10145, 17475
 Heisteria, TAX., 2865
 Jasminum, MORPH., 15522;
 TAX., 11889, 15483, 15503
 Olea, MORPH., 1172
 Osmanthus, MORPH., 10144;
 TAX., 4785

SALVADORACEAE
 Azima, EMB., TAX., 4806

LOGANIACEAE
 Strychnos, DIST., TAX., 13752

GENTIANACEAE
 Bartonia, TAX., 1158
 Centaureum, TAX., 1158, 10133
 Curtia, TAX., 2863
 Gentiana, MORPH., 2912; TAX.,
 11891

APOCYNACEAE
 Allamanda, MORPH., 15522
 Alyxia, TAX., 15505
 Aspidosperma, TAX., 2867
 Eranalia, TAX., 11900
 Galactophora, TAX., 2867

Macrosiphonia, TAX., 11900
Mandevilla, TAX., 11900
Odontadenia, TAX., 2867
Rauwolfia, TAX., 2882
Tabernaemontana, TAX., 2882,
15505
Vinca, HIST., 10172

ASCLEPIADACEAE

Caralluma, TAX., 6413
Ceropegia, TAX., 17541
Gonolobus, TAX., 2867
Marsdenia, TAX., 2882
Metastelma, TAX., 2882
Schizoglossum, TAX., 2870
Solenostemma, MORPH., 11899
Stapelia, TAX., 6418
Stultitia, TAX., 1145
Tylophora, TAX., 13768, 15483
Vincetoxicum, TAX., 2828A,
2882, 6429
Xysmalobium, TAX., 2870

POLEMONIALES (TUBIFLORAE)
Labiales, DIST., 17522

CONVOLVULACEAE

ACOSTEROMON, 10148
ASTROMEREMIL, 10148
Cuscuta, MORPH., 15817
Ipomoea, HIST., 10172; TAX.,
2828, 6437

POLEMONIACEAE

Collomia, TAX., 1158
Gilia, TAX., 1158
Linanthus, TAX., 2868, 4797B
Navaretia, TAX., 4797
Phlox, TAX., 1158, 6403

FOUQUIERIACEAE

Fouquieria, TAX., 11886

HYDROPHYLLACEAE

TAX., 17520
Capnorea, TAX., 1158
Ellisia, TAX., 17520
Eucrypta, TAX., 4779, 17520
Nomophila, TAX., 17520
Hesperochiron, TAX., 1158
Hydrophyllum, TAX., 8442
Nama, TAX., 13758
Phacelia, TAX., 4779, 8442
Pholistoma, TAX., 17519, 17520

BORAGINACEAE

Ehretia, TAX., 2882
Heliotropium, MORPH., 2910
Lycopsis, EMB., 2915
Tournefortia, TAX., 2882

VERBENACEAE

Callicarpa, TAX., 13753
Olerodendron, TAX., 2882
Duranta, L. H., 12223; TAX.,
2882
Lippia, TAX., 2882

MENTHACEAE (LABIATAE)

Alopecurus, CYT., TAX., 4774
Galeopsis, CYT., 12507
Hyptis, TAX., 5268, 17521
Lepechinia, TAX., 2882
Mentha, CYT., 1701
Petunia, CYT., 14347
Salvia, CYT., 1697; DIST.,
17522; TAX., 2882, 5268,
8444, 10119
Scutellaria, TAX., 6404, 17523
Sideritis, TAX., 8444
Thymus, TAX., 6425, 8444

SOLANACEAE

Athenaea, TAX., 2882
Capsicum, TAX., 2882, 6437
Hyoscyamus, TAX., 15511
Lycianthes, TAX., 2882, 6437
Markea, TAX., 2882
Nicotiana, CYT., 1168; EMB.,
MORPH., 1167
Physalis, DIST., (†) 7048; TAX.,
2828A
Salpichroa, TAX., 2846, 8432
Solanum, CYT., 7097; HIST.,
10172; TAX., 2882, 6437
VALERIA, 2882

SCROPHULARIACEAE

Antirrhinum, CYT., 10713, 12501
Artanema, TAX., 11895
Buchnera, TAX., 11895
Calceolaria, TAX., 2882
Castilleja, TAX., 2882, 6399
Celsia, MORPH., 13786
Isoplexis, MORPH., 13786
Limonophila, TAX., 11895
Lindernia, TAX., 11895
Mimulus, TAX., 4786
Orthocarpus, TAX., 6399
Penstemon, TAX., 6410
Striga, TAX., 11895
Synthyris, TAX., 1158
Torenia, TAX., 11895
Verbascum, TAX., 8444

BIGNONIACEAE

Amphilophium, TAX., 2828A
Enallagma, TAX., 2882
Schlegelia, TAX., 2827A, 2882

OROBANCHACEAE

Conopholis, TAX., 6429
Orobancha, MORPH., 15817

GESNERIACEAE

Alloplectus, TAX., 2827A, 6437
Besleria, TAX., 6437, 10146
Campana, TAX., 6437
Centrosolenia, TAX., 6437
Codonanthe, TAX., 6437
Columnnea, TAX., 2827A, 2828A,
6437
Cremosperma, TAX., 2872
Cyrtandra, TAX., 6431
Drymonia, TAX., 6437
Kohleria, TAX., 6437
Monopyle, TAX., 6437

LENTIBULARIACEAE

Utricularia, CYT., EMB., 2907;
MORPH., 2907, 15522

GLOBULARIACEAE

Globularia, TAX., 4788

ACANTHACEAE

Adenosma, TAX., 11895
Aphelandra, TAX., 2827A, 6437
Beloperone, TAX., 6437
Blepharis, TAX., 15483
Bucuragia, TAX., 6437
Carlowrightia, TAX., 6437
Chamaeranthemum, TAX., 6437
Dichiptera, TAX., 6437
Dyschoriste, TAX., 6437
Elytraria, TAX., 2864
Glockeria, TAX., 6437
Jacobinia, TAX., 6437
Justicia, TAX., 6437
Lepidagathis, TAX., 15483
Mendoncia, TAX., 2885, 6437
Pseuderanthemum, TAX., 6437
Ruellia, TAX., 6437

MYOPORACEAE

Myoporum, EMB., TAX., 4806
Ofria, EMB., TAX., 4806

PLANTAGINALES

PLANTAGINACEAE

Plantago, DIST., 17544; TAX.,
15482

RUBIALES

RUBIACEAE

Anisomeris, TAX., 2828A
Asperula, TAX., 8444
Cephaelis, TAX., 6437
Coffea, CYT., 12502
Coussarea, TAX., 6437
Didymaea, TAX., 6437
Enterospermum, TAX., 11885
Galium, TAX., 8444
Gardenia, L. H., 12223; TAX.,
8437
Gonzalagunia, TAX., 6429, 6437
Guettarda, TAX., 6429, 6437
Hoffmannia, TAX., 2828A, 6437
Ixora, TAX., 2859, 6405, 8437,
11878
Ladenbergia, TAX., 6437
Machaonia, TAX., 6437
Morinda, TAX., 6431
Mussaenda, TAX., 1129, 15509
Myrmecodia, MORPH., 2916
Ophiorrhiza, TAX., 2874
Palicourea, TAX., 6429, 6437
Psychotria, TAX., 2828A, 6481,
6437
Randia, TAX., 2858, 6437
Rondeletia, TAX., 6437
Rudgea, TAX., 6437
Santalina, TAX., 11885
Sarcopygma, TAX., 6431
Tarenna, TAX., 11885
Tricalysia, TAX., 8437

CAPRIFOLIACEAE

Lonicera, TAX., 1158
Sambucus, TAX., 6381
Viburnum, TAX., (E) 17477

VALERIANACEAE

Belonanthus, TAX., 10150
Valeriana, TAX., 1158, 6437,
8443, 10150

DIPSACACEAE

Knautia, TAX., 8444

CAMPANULALES

(CAMPANULATAE)

CUCURBITACEAE

Bryonia, EMB., 11930
Cayaponia, TAX., 6437
Citrullus, MORPH., 10171
Cucumis, MORPH., 10171
Cucurbita, MORPH., 10171
Gurania, TAX., 6437
Lagenaria, MORPH., 10171
Trichosanthes, MORPH., 15522
Xerosicyos, TAX., 10137

CAMPANULACEAE

Burmeistera, TAX., 6437
Campanula, TAX., 4797B
Centropogon, TAX., 6437
Clermontia, TAX., 11896, 11897
Cyananthus, TAX., 6397
Cyanea, TAX., 11897
Githopsis, TAX., 1158
Haynaldia, CYT., 7098
Lobelia, EMB., 11914; MORPH.,
15520; TAX., 11897

GOODENIACEAE

EMB., 4812

ASTERACEAE

(COMPOSITAE)

Achillea, TAX., 17529
Achyrocline, TAX., 2828A
Ainsliaea, TAX., 15505
Antennaria, CYT., 3445; TAX.,
1158
Aplopappus, TAX., 13751
Arnica, TAX., 1158
Artemisia, CYT., MORPH., 4808;
TAX., 1158, 11888
Aster, CYT., TAX., 6428
Athroisma, TAX., 15483
Baccharis, TAX., 6437
Balsamorhiza, TAX., 1158
Blepharispermum, TAX., 15488
Cacalia, TAX., 6415, 13751
Calea, TAX., 6437
Chaptalia, TAX., 15500
Chrysanthemum, CYT., MORPH.,
1134
Cirsium, TAX., 17528, 17539
Clibadium, TAX., 13751
Cosmos, HIST., 10172
Crepis, CYT., 4777, 7099, 16159;
PHYL., 4777; TAX., 1122,
4777
Crupina, TAX., 8444
Dahlia, HIST., 2908
Desmanthodium, TAX., 13751
Dysodia, TAX., 15500
Erigeron, CYT., 3445; TAX.,
13751, 15500
Erlangea, TAX., 15483
Eupatoriastrium, TAX., 13751
Eupatorium, MORPH., HIST.,
17558
Gnaphalium, TAX., 8448
Haplopappus, TAX., 1158
Helianthus, MORPH., 2908
Hidalgia, HIST., 10172
Hieracium, CYT., 3445; TAX.,
1158, 8444
Hypochoeris, TAX., 15500
HYSTRICOPHORA, 15483
Lactuca, CYT., 5294; TAX., 8444
Lapsana, TAX., 2883
Liabum, TAX., 6487
Mikania, TAX., 13751
Onopordon, TAX., 8444
Onoseris, TAX., 15500
Perezia, TAX., 15500
Picris, TAX., 17530
Psacalium, TAX., 13751
Pyrracoma, TAX., 1158
Rumfordia, TAX., 13751
Sciadocephala, TAX., 2827A
Senecio, TAX., 4763, 6406, 6437,
15500
Sideranthus, TAX., 13751
Solidaster, TAX., 10134
Sphaeranthus, TAX., 1142,
15483
Tagetes, HIST., 10172
Taraxacum, CYT., 8445, 10712;
TAX., 6407, 17538
Vernonia, DIST., 10156; TAX.,
10156, 13751
Viguiera, TAX., 2885
Werneria, TAX., 17536
Wulfa, TAX., 13751

INCERTAE SEDIS

(In Dicotyledones)

Capsulocarpus, TAX., (K) 17476
Carpolithus, TAX., (N) 4723

SYSTEMATIC INDEX

(For introductory guide see pages 1812-1813)

ANIMAL KINGDOM

PHYL., 3438, 14342; TAX., 10691

PROTOZOA

BIBL., 3238; DIST., 14200; PHYL., 8899

SARCODINA

ACTINOPODA

HELIZOA

APHROTHORACA
Actinosphaerium, CYT., 8917

MYCETOZOA

(See Myxomycetes, p. 1861^{1, 2})

RHIZOPODA

FORAMINIFERA

BIBL., TAX., (K) 15978;
DIST., (K) 17925

PLACOPSILINIDAE
ADHAERENTIA, (†), TAX.,
10529

LAGENIDAE
Citharina (†), TAX., (K) 15978
CITHARINELLA (†), (K)
15978

NONIONIDAE
TAX., 14199
Elphidium (†), TAX., (N) 14199
Nonion, TAX., 14199
Nonionella (†), TAX., (K) 14199

CAMERINIDAE
Biplanispira (†), TAX (E)
14203
Camerina (†), TAX., (K, E)
14196
Cyclocypus, (†), MORPH., (E &
N) 14198
Operculinoides (†), TAX., (K,
Ter) 14196
Spirocypus, TAX., (N) 10517

GLOBOROTALIIDAE
Globorotalia, MORPH., 14198

RUPERTIIDAE
Eorupertia, TAX., (K) 17925

ORBITOIDIDAE
Lepidocyclus (†), MORPH., (E
& N) 14198

INCERTAE SEDIS
(In Foraminifera)
FLOURENSINA (†), (K)
15978

AMOEBAEA

AMOEBA

AMOEBAEIDAE
Amoeba, CYT., 1730, 3266;
TAX., 3255
Chaos, CYT., 3254
Dactylosphaerium, TAX., 3255
Flabellula, CYT., 3261
Mayorella, CYT., 3254; L. H.,
5104

Saccamoeba, TAX., 3255
Trichamoeba, CYT., 3254

ENDAMOEBIDAE
Dientamoeba, CYT., 5105
Endamoeba, TAX., 1580
Endolimax, TAX., 1580

TESTACEA

ARCELLIDAE
Cochliopodium, CYT., 3254
Hyalosphenia, DIST., TAX.,
10526

GROMIIDAE
Amphitrema, DIST., 10526
Gromia, L. H., 6774

INFUSORIA

CILIATA

HOLOTRICHIDA

ASTOMINA
HOPLITOPHYRIDAE
Hysteroecinetia, TAX., 10514

OPALINIDAE
Zelleriella, TAX., 12277

INCERTAE SEDIS
(In Astomina)
Haptophrya, L. H., MORPH.,
10527
Metaradiophrya, TAX., 1575

CYMNOSTOMINA

ENCHELINIDAE
Didinium, MORPH., 6765

CHLAMYDODONTIDAE
Chilodon, CYT., 1722

TRICHOSTOMINA

CHILIFERIDAE
Colpoda, L. H., 6772
Woodruffia, L. H., TAX., 6767

PARAMECIDAE
Paramecium, CYT., 3254; EMB.,
11488; L. H., 3262, 3269,
5099, 5102, 10519, 10523;
MORPH., 10522

HETEROTRICHIDA
BURSARIDAE
Balantidium, TAX., 3265

PLAGIOTOMIDAE
Blepharisma, L. H., 3260, 8724
Nycottherus, TAX., 12278
Spirostomum, TAX., 6763

CLEVELANDELLIDAE
Paraclevelandia, CYT., L. H.,
3263

OLIGOTRICHIDA
HALTERIIDAE
Halteria, CYT., 3254

HYPOTRICHIDA
PLEUROTTRICHIDAE
Stylonychia, MORPH., 3259

PERITRICHIDA

VORTICELLIDAE

Cothurnia, MORPH., 3264, 8723
Epistylis, MORPH., 3264
Pyxidium, MORPH., 3264
Zoothamnium, MORPH., 3264

SUCTORIA

ACINETIDAE
Thecacinetia, MORPH., TAX.,
10530

SPOROZOA

TELOSPORIDIA

GREGARINIDA

EUGREGARINIDA
ACEPHALINA
LEUCODINIDAE
Lecudina, CYT., 1732

CEPHALINA

GREGARINIDAE
Cephaloidophora, TAX., 6766
Gregarina, TAX., 6766, 12287
Lepismatophila, TAX., 12287
Pyxinoides, TAX., 6766

ACTINOCEPHALIDAE
Actinocephalus, TAX., 1580

DACTYLOPHORIDAE
Nina, L. H., 6761, 12288

SCHIZOGREGARINIDA
SCHIZOCYSTIDAE
LIPOCYSTIS, 10524

SELENIIDAE
Selenidium, TAX., 1577
SELENOCYSTIS, 1577

COCCIDIOMORPHA

COCCIDIA

ADELEIDAE
Hepatozoon, TAX., 12285
Klossia, L. H., TAX., 10528

EIMERIIDAE

Caryospora, L. H., 12286
Eimeria, L. H., 6762, 6770;
MORPH., 12276; TAX., 1587,
3258, 3271, 6762, 6770,
8720, 12276, 14202, 14204
Isospora, L. H., 12275; TAX.,
3270
Wenyonella, TAX., 1576

HAEMOSPORIDIA

HAEMOPROTEIDAE
Haemoproteus, DIST., 17901;
TAX., 3257
Leucocytozoon, DIST., 12278,
17901; TAX., 3257

PLASMODIIDAE
Plasmodium, DIST., 8709, 17901;
L. H., 1578, 2607, 8668,
8707, 8717, 10442, 10481,
10499, 10510, 12254,
12265, 15949, 15952;
MORPH., 6759, 8716, 8717,
14201; TAX., 1578, 1588,
3257, 8722

BABESIIDAE
Anaplasma, L. H., 14175
Babesia, CYT., 3268
Babesiella, L. H., 8719; TAX.,
12246
Nuttallia, MORPH., 6756; TAX.,
1583
Theileria, L. H., 15980; TAX.,
6769
Toxoplasma, L. H., TAX., 1578

NEOSPORIDIA
CNIDOSPORIDIA
MYXOSPORIDIA
MYXOBOLIDAE
Henneguya, DIST., 3396; L. H.,
3396, 10521; TAX., 17926

MICROSPORIDIA
NOSEMATIDAE
Thelohanina, DIST., L. H., 15930

PORIFERA · COELENTERATA · STROMATOPOROIDEA · GRAPTOLITOIDEA
CTENOPHORA

PORIFERA

DESMOSPONGIAE

TITUSVILLIIDAE, N.
FAM., (†) 6775; **CORTI-**
COSPONGIINAE, N. SUB-
FAM., (D) 6775

KERATOSA

HALISARCIDAE
Halisarca, EMB., 9792

HAPLOSCLERINA

SPONGILLIDAE
Spongilla, TAX., 10532

INCERTAE SEDIS

(In Desmospongiae)
Calathospongia, TAX., (†) 6775
CORTICOSPONGIA, (D) 6775
ITHACADIOTYA, (D) 6775
TITUSVILLIA, (†) 6775

COELENTERATA

HYDROZOA

Sertularidae, DIST., L. H.,
MORPH., 12608
Aequorea, MORPH., TAX., 15984
Agalma, MORPH., 15984
Corydendrium, TAX., 3413
Craspedacusta, DIST., 3276,
8729; TAX., 8725
Dipurena, L. H., 15982
Gemmaria, TAX., 3413
Hydra, EMB., 11463; MORPH.,
5971; TAX., 8726
Lar, MORPH., 3278
Muggiaea, MORPH., 3278
Obelia, EMB., 9785
Pelmatohydra, EMB., 6779
SOLNHOFFENISTOMITES, (J)
6778
Tubularia, MORPH., 8978
Velella, MORPH., 15984
Willia, MORPH., 3278

SCYPHOZOA

Aurelia, HIST., 10533
Chrysaora, HIST., 17066
Cyanea, HIST., 17066
Lucernaria, L. H., MORPH., TAX.,
3273
Solnhofenistomites, TAX., (J)
6780

ANTHOZOA

ALCYONARIA
TAX., (Pal) 10534; **AN-**
THOMASTINAE, N. SUB-
FAM., 6777
Aulacophyllum, TAX., (D)
10535
Bathyalcyon, HIST., MORPH.,
6777
Dendronophthya, TAX., 3413
DIVESOPHYLLUM, (D)
10535
Hallia, TAX., (D) 10535
Orbignya, PHYL., (K) 15981
Vaccinites, PHYL., (K) 15981
Veretillum, TAX., 3413

STROMATOPOROIDEA

(Vacant)

GRAPTOLITOIDEA

Dicranograptus, DIST., TAX., (O)
3284
Monograptus, MORPH., (†) 3272

CTENOPHORA

(Vacant)

PLATYHELMINTHES (including NEMERTEA) · MESOZOA

PLATYHELMINTHES

BIBL., 1563, 3238

TURBELLARIA

CYT., PHYL., 5300
INCERTAE SEDIS
(In Acoela)
Nematoderma, TAX., 1602
RHABDOCOELA
DALYELLIDAE
Phaenocora, TAX., 12300
PSEUDOPHAENOCORA, 8730
MACROSTOMIDAE
Macrostrom, TAX., 6792,
12292
POLYCYSTIDIDAE
KLATTIA, 12295
TYPHLOPLANIDAE
Castrada, TAX., 12294
Krumbachia, TAX., 6799
Mesostoma, CYT., 8916; TAX.,
8732, 12300, 14207
Olisthanella, TAX., 6799

ALLOEOCOELA

PLAGIOSTOMIDAE
Hydrolimax, TAX., 8731

TRICLADIDA

BDELLOURIDAE
Bdelloura, CYT., 60

BIPALIIDAE

Bipalium, TAX., 10541
DENDROCOELIDAE
Sorocelis, TAX., 10541; MORPH.,
17935

GEOPLANIDAE

Geoplanea, TAX., 10541

PLANARIIDAE

Curtisia, CYT., 60
Dugesia, L. H., 17934; TAX.,
10541, 17934
Euplanaria, EMB., 13348; TAX.,
10541, 17934

Jijimia, TAX., 12302
Planaria, EMB., 11465; MORPH.,
17064
Polycelis, TAX., 12302
Sphalloplana, TAX., 17935

RHYNCHODEMIDAE
Rhynchodemus, DIST., 10541

POLYCLADIDA
TAX., 15989

EURYLEPTIDAE
HYMANIA, 15989

LEPTOPLANIDAE
Discocelis, TAX., 6798
Discoplana, TAX., 10540
Euplana, TAX., 10540
Leptoplana, TAX., 10541
Stylochoplana, TAX., 6798,
10540

PLANOCERIDAE
Eustylochus, TAX., 10540
Stylochus, TAX., 6798, 10540

PSEUDOCERIDAE
Pseudoceros, TAX., 6798

STYLOCHIDAE
Eustylochus, TAX., 6798

INCERTAE SEDIS
(In Polycladida)

Acerotisa, TAX., 6798
CONJUGATEUS, 6798
Gnesioceros, TAX., 10540
Hoploplana, TAX., 6798
OCULOPLANA, 6798
OLIGOCLADO, 6798
Pelagoplana, TAX., 10540
Prosthlostomum, TAX., 6798

TREMATODA

L. H., 3279

DIGENEA

NOTOPORIDAE, N. FAM.,
6803; **EXOCHINAE**, N.
SUBFAM., 6803

ACANTHOCOLPIDAE
Stephanostomum, L. H., 15986

ALLOCREADIIDAE
Allocreadium, TAX., 14210
Alloglossidium, DIST., 5107
Caudotestis, TAX., 6803
Cymbophallus, TAX., 6803
Decemtestis, TAX., 6803
Lepidapedon, TAX., 6803
Lepocreadium, L. H., 5109; TAX.,
6803

LEPTOPLANIDAE
Lepotrema, TAX., 6803
Macroderoides, DIST., 5107
Maculifer, TAX., 6803
Opechona, TAX., 6803
Opeocelus, TAX., 6803
Opegaster, TAX., 6803
Plagioporus, TAX., 6803
Podocotyle, TAX., 17938
PSEUDOLEPIDAPEDON,
6803

PSEUDOPLAGIOPORUS, 6803
PYCNADENOIDES, 6803

ASPIDOGASTRIDAE
Lophotaspis, L. H., 5111

BRACHYLAEMIDAE
Brachylaemus, TAX., 12293
Postharmostomum, L. H., 14157

BUCEPHALIDAE
Bucephalopsis, TAX., 6803
Prosorhynchus, TAX., 6803
PSEUDOPROSORHYNCHUS,
6803

CEPHALOGONIMIDAE
Prosthogonimus, L. H., 1591,
12258

CLINOSTOMIDAE
Clinostomum, TAX., 15991

DICROCOELIDAE
Brachycoelium, TAX., 1598
Dicrocoelium, L. H., 14183
Eurytrema, TAX., 17940

ECHINOSTOMIDAE
Echinoparyphium, DIST., 1590
Echinostoma, DIST., 1590; L. H.,
3279, 17911; TAX., 3279
Hypoderaeum, DIST., 1590
Petasiger, L. H., MORPH., 12289
Stephanoprora, L. H., 1591;
TAX., 1590

FASCIOLIDAE
Fasciola, DIST., 12261; L. H.,
14192; MORPH., 1594

FELLODISTOMIDAE
Bacciger, TAX., 6803
Benthotrema, TAX., 6803
Faustula, TAX., 15990
Paradiscogaster, TAX., 6803
PIRIFORMA, 6803
Rhodotrema, TAX., 6803
SYMMETROVESICULA, 6803

GORGODERIDAE
Gorgoderia, HIST., 6796
Gorgoderina, L. H., 14208; TAX.,
1600
Phyllodistomum, L. H., TAX.,
1595

HEMIURIDAE
Aphanurus, TAX., 6803
Aponurus, TAX., 6803
Derogenes, TAX., 6803
Dinosoma, TAX., 6803
Genarchopsis, TAX., 6803
Halipegus, TAX., 12301
Hemius, TAX., 6803
Hysteroleicitha, TAX., 6803
Leicithaster, TAX., 6803
Leicithochirium, TAX., 6803
Leicithocladium, TAX., 6803
Parahemius, TAX., 6803
Sterrhurus, TAX., 6803
Tubulovesicula, TAX., 6803

HETEROPHYIDAE
Maritrema, DIST., L. H., MORPH.,
TAX., 1591
Paraegonimus, L. H., 10542
Spelotrema, L. H., 1591

LECITHODENDRIIDAE
Leicithodendrium, TAX., 1598

MONORCHIDAE
Asymphyllodora, TAX., 6803
Bivesicula, TAX., 6803
BIVESICULOIDES, 6803
PARAMONORCHIDAE, 6803
PROCTOTREMATOIDES, 6803

NOTOCOTYLIDAE
Notocotylus, DIST., 1590; L. H.,
1591

PLATYHELMINTHES (Concluded) · NEMATODA · ACANTHOCEPHALA · NEMATOMORPHA

NOTOPORIDAE

NOTOPORUS, 6803

OPISTHORCHIDAE

Amphimerus, DIST., L. H.,
MORPH., TAX., 1591; TAX.,
17931
Clonorchis, L. H., 17932, 17933
Diasia, TAX., 10543
Haematotrephus, TAX., 17931

PARAMPHISTOMIDAE

Cotylophoron, L. H., 6781
Diplediscus, L. H., MORPH., 1592
Stichorchis, L. H., 12290
Zygoctyle, DIST., 1590; L. H.,
1591

PHILOPHTHALMIDAE

Cloacitrema, TAX., 17939

PLAGIORCHIDAE

Styphlodorinae, TAX.,
17930
Allopharynx, TAX., 15990
Dasymetra, TAX., 6784
Megacustis, TAX., 15990
Plagiorchis, L. H., 17942
Pyasiorchis, TAX., 15990
Styphlodora, TAX., 17930

SCHISTOSOMIDAE

Schistosomium, TAX., 3298

SPIRORCHIDAE

TAX., 6788
Amphiorchis, TAX., 6788
Coeritremia, TAX., 6788
Diarmotorchis, TAX., 6788
Gomiotremia, TAX., 6788
Haematotremia, TAX., 6788
Hapalorhynchus, TAX., 6788
Hapalotremia, TAX., 6788
Henotosoma, TAX., 6788
Learedius, TAX., 6788
Neospirochis, TAX., 6788
Plasmiorchis, TAX., 6788
Proparorchis, TAX., 6788
Spirhapalum, TAX., 6788
Spirorchis, TAX., 6788
Tremarhynchus, TAX., 6788
Unicaecum, TAX., 6788
Vasotremia, TAX., 6788

NEMATODA

NEMATODA

BIBL., 1563

RHABDITOIDEA

RHABDITIDAE

Rhabditia, TAX., 8739

RHABDIASIDAE

Rhabdias, CVT., 1718

CEPHALOBIDAE

Acrobeles, TAX., 16000
Neocephalobus, N. SP. 17772
PANAGRELLUS, 17957
PANAGROBELUS, 17958
Plectonchus, TAX., 17958
PSEUDOCROBELES, 16000

DIPLOGASTERIDAE

Acrobeloides, TAX., 16000
Diplogaster, TAX., 8739, 14218

TYLENCHIDAE

Anguillulina, L. H., 1432
Aphelenchoides, L. H., 17772;
TAX., 10547
Criconeimoides, DIST., L. H.,
16000
Heterodera, L. H., 4973, 17774
Hexatylenus, L. H., MORPH., 1602,
1603; TAX., 1602
Paratylenchus, TAX., 17958
Pratylenchus, L. H., 15820
Tylenchus, MORPH., TAX., 3282

ELLANTONEMATIDAE

PROTHALLONEMA, 15995

ASCARIDAE

Ascaris, CVT., 7117; DIST.,
15846; L. H., 17906;
MORPH., 10546

STRIGEIDAE

Apatemon, DIST., 1590
Cotylyrus, L. H., 1591
Diplostomum, HIST., 10542
Pharyngostomum, L. H., 6802
Tetracotyle, HIST., 10542
Tylolephrys, HIST., 10542

SYNCOELIIDAE

Lecithophyllum, TAX., 6803

TELORCHIDAE

Cercorchis, DIST., TAX., 6788
TETRAPAPILLATREMA, 1597

TROGLOTEMATIDAE

Paragonimus, L. H., 17941

ZOOGONIDAE

Brachyenteron, TAX., 6803
Diphtherostomum, TAX., 6803
Lecithostaphylus, TAX., 5108
Zoogonoides, TAX., 6803

INCERTAE SEDIS

(In Digenea)
Cercaria, L. H., 1597, 3279,
17948; TAX., 3279, 3298,
5106, 5110, 10537, 10542,
12291, 14203, 17946,
17947
Coitocaecum, L. H., 17937
Distomum, TAX., 15990
Glomeris, TAX., 6803
Hypocreadium, TAX., 6803
Metadana, TAX., 6803
Opisthoglyphe, L. H., 10542
Pleorchis, TAX., 6803
PSEUDEXORCHIS, 6803
RHYTIDODIDES, 17945
Tergestia, TAX., 6803

MONOGENEA

GYRODACTYLIDAE
ANONCHOHAPTOR, 6794
Cleidodiscus, TAX., 6794
Dactylogyrus, TAX., 6794, 17944
Murraytremia, TAX., 6794
NEODACTYLOGYRUS, 17944
Tetracleidus, TAX., 6794

NEMATODA · ACANTHOCEPHALA · NEMATOMORPHA

CONTRACAECA

Contraecum, DIST., 6795;
MORPH., 10546

SUBULURIDAE

Strongylus, TAX., 14216
Subulura, L. H., 10478; MORPH.,
10546

KATHLANIIDAE

Spironoura, DIST., 6783

OXYURIDAE

Alaeuris, TAX., 8735
Aspiculuris, TAX., 17956
AUSTROXYRIS, 14214
Oxyuris, TAX., 14214
PARALAEURIS, 8735
Passalurus, TAX., 14214
Synphacia, TAX., 14214
TYRHLONEMA, 14216

THELASTOMATIDAE

Aorurus, TAX., 17950
Thelastoma, TAX., 17950

INCERTAE SEDIS

(In Ascaridae)
Agamascaris, TAX., 14216

STRONGYLATA

STRONGYLIDAE

Chabertia, L. H., 1604
Cylicocercus, TAX., 15997
Cylicodontophorus, TAX., 15997
Strongyloides, DIST., 3244; L. H.,
1604, 10479, 15959, 17953
Trichonema, L. H., 1565

ANCYLOSTOMATIDAE

Bunostomum, L. H., 1604; TAX.,
3283
Bunostomum, TAX., 3283

TRICHOSTRONGYLIDAE

Austrostrongylus, TAX., 14214
Oitellinema, TAX., 17951
CITELLINOIDES, 17952

MICROCOTYLIDAE

Microcotyle, TAX., 10536

POLYSTOMIDAE

Polystoma, DIST., 6783; L. H.,
MORPH., 1596
Polystomoides, L. H., MORPH.,
1596

TRISTOMIDAE

TAX., 10544
Benedenia, TAX., 10544
Capsala, TAX., 10544
Capaloides, TAX., 10544
Epibdella, TAX., 10544

INCERTAE SEDIS

(In Trematoda)

LEUCOCHEILIDIOMORPHA

DIST., L. H., MORPH., TAX.,
1591
Sphaeridiotrema, L. H., 1591

CESTOIDEA

CESTODA

PSEUDOPHYLLIDAE

CARYOPHYLLAEIDAE
BRACHYURUS, 14211

TETRAHYNCHIDAE

(TRYPANOTHYNCHA)

TENTACULARIIDAE

(TETRAHYNCHIDAE)

Nybelinia, TAX., 6795

TETRAHYLLIDAE

PROTEOCEPHALIDAE

Ophiotaenia, TAX., 15992

CYCLOPHYLLIDAE

ANOPLOCEPHALIDAE

Cittotaenia, L. H., 17936
Inermicapsifer, TAX., 15987
Moniezia, L. H., 17936
Oochoristia, TAX., 1601

DAVAINEIDAE

Raillietina, L. H., 14160; TAX.,
12300A, 15987, 15988,
15992
Schistometra, TAX., 15987

DILEPIDIDAE

Catenotaenia, TAX., 15987
Chosnotaenia, TAX., 12296
Dendroterina, L. H., 17943
Dilepis, TAX., 15992
Dipylidium, L. H., 8683; MORPH.,
14212; TAX., 10545, 14212
NOTOPENTORCHIS, 6785
ONDERSTEEPOORTIA, 15987
PSEUDANGULARIA, 6785
PSEUDOCHEANOTAENIA,
6786
VITTA, 6787

HYMENOLEPIDIDAE

Aploparaksis, TAX., 1593
Haploparaksis, L. H., TAX., 1593
Hymenolepis, DIST., 1593; L. H.,
1593, 8683, 10477; TAX.,
14209, 15987, 15988,
15992
Oligorchis, TAX., 15992

NEMATOTAENIIDAE

Cylindrotaenia, TAX., 6793
GASTROTAENIA, L. H., MORPH.,
3281

TAENIIDAE

Cladotaenia, TAX., 15987
Taenia, L. H., 1564, 1589,
15985; TAX., 6797, 10538

NEMERTEA

AMPHIPORELLA

Amphiporus, TAX., 12303
ATYPONEMERTES, 12304
Proneurotes, TAX., 12303
Prostoma, DIST., MORPH., 3287;
TAX., 3288

MESOZOA

DICYEMIDAE

L. H., MORPH., 14206

ACANTHOCEPHALA

MONHYSTERATA

MONHYSTERIDAE

Monohystera, TAX., 15998

Monohystrella, TAX., 15998

ENOPLATA

ONCHOLAIMIDAE

Metaparoncholaemus, MORPH.,
TAX., 3282
Oncholaimum, MORPH., TAX.,
3282
Pelagonemertes, MORPH., 8738

DORYLAIMATA

DORYLAIMIDAE

Dorylaimus, TAX., 15998, 17957

TRICHOUIDAE

Capillaria, L. H., 1604, 8691,
14193

Trichuris, L. H., 1604

TRICHINELLIDAE

Trichinella, DIST., 1551

INCERTAE SEDIS

(In Nematoda)

Stegella, TAX., 17957

Zeldia, TAX., 16000

ACANTHOCEPHALA

Leptorhynchoides, L. H., 10549

Macracanthorhynchus, EMB.,
769

Nephridiaecanthus, L. H., 3285

Polymorphus, TAX., 10550

Profilicollis, TAX., 10550

Prosthenorchis, MORPH., TAX.,
3286

NEMATOMORPHA

(Vacant)

**SIPUNCULOIDEA · GASTROTRICHA · ECHINODERA
ROTATORIA · CHAETOGNATHA**

SIPUNCULOIDEA

(Vacant)

GASTROTRICHA

TAX., 14222

CHAETONOTOIDEA

CHAETONOTIDAE

Chaetonotus, TAX., 6804, 14221

ECHINODERA

(Vacant)

ROTATORIA

PLOIMA

NOTOMMATIDAE

Dicranophorus, TAX., 6806, 6807

Lindia, TAX., 6806, 6807

Notommata, TAX., 6806, 6807

Proales, TAX., 6806, 6807
Squatinella, TAX., 6807

TRICHOERCIDAE
Trichocerca, TAX., 6805, 6807

BRACHIONIDAE
Brachionus, MORPH., 14220
Keratella, TAX., 6807

EUCHLANIDAE
Euchlanis, TAX., 6807
Lecane, TAX., 6805, 6807
Lepadella, TAX., 6807
Trichotria, TAX., 6807

FILINIIDAE
Filinia, TAX., 6807

TESTUDINELLIDAE
PSEUDOPLOESOMA, 6807

BDELLIDAE
PHILODINIDAE
Dissotrocha, TAX., 14219

CHAETOGNATHA

Sagitta, DIST., 10794

ANNELIDA

DIST., TAX., (J) 15943

POLYCHAETA

BIBL., DIST., MORPH., TAX., 1606
Polychaeta, TAX., 17966

AMPHINOMIDAE
Notopygos, TAX., 17964

EUPHROSYNIDAE
Euphrosyne, TAX., 1606

POLYNOIDAE
TAX., 6813
Arctonoe, TAX., 17962
Halosydna, TAX., 17962
HALOSYDNELLA, 6813
Harmothoe, TAX., 1606
Hesperonoe, TAX., 17962

APHRODITIDAE
Aphrodita, TAX., 17962

ACOETIDAE
TAX., 6813

NEPHTHYIDAE
TAX., 17963
Nephtys, TAX., 17962, 17963

SYLLIDAE
Procerastea, EMB., 11466

NEREIDAE
DIST., TAX., 1607
Ceratoneis, TAX., 17962

Neanthes, TAX., 1607
Nereis, TAX., 17962

LEODICIDAE
Palolo, TAX., 1608

LUMBRINEREIDAE
Arabella, TAX., 17962
Aracoda, TAX., 17962
Drilonereis, TAX., 17962
Lumbrineris, CYT., 1733; HIST., 2479; TAX., 17962

STAUROCEPHALIDAE
Stauronereis, TAX., 1608

GLYCERIDAE
Glycera, TAX., 17962
Hemipodus, TAX., 1608

ARICIIDAE
Scoloplos, TAX., 17962

SPIONIDAE
Spio, TAX., 17962

CHAETOPTERIDAE
Chaetopterus, CYT., 7120, 12512; EMB., 13843; MORPH., 17965

CIRRATULIDAE
Cirratulus, TAX., 17962

OPHELIIDAE
Armandia, TAX., 1608
Ophelia, DIST., TAX., 1605; MORPH., 12806
PECTINOPHELIA, 1608
Thoracophelia, TAX., 1608
Travisia, TAX., 1608

SCALIBREGMIDAE
Gwasitoa, TAX., 17962
Kebuita, TAX., 17962

SABELLIDAE
Branchioma, TAX., 17962
Demonax, TAX., 17962
Distyllia, TAX., 17962
Eudistyllia, TAX., 17962
Laonome, TAX., 17962
Megalomma, TAX., 17962
Myxicola, TAX., 17962
Potamilla, TAX., 17962
Pseudopotamilla, TAX., 17962
SABELLASTARTE, 1606

SERPULIDAE
Protula, TAX., 17962
Serpula, DIST., TAX., (J) 15943

MYZOSTOMIDA

MYZOSTOMIDAE
Myzostoma, L. H., TAX., 3290

OLIGOCHAETA

AEOLOSOMATIDAE
Aeolosoma, TAX., 6815

TUBIFICIDAE
Limnodrilus, EMB., 11467
Tubifex, EMB., 11467

LUMBRICULIDAE
Rhynchelmis, CYT., 1728

GLOSSOSCOLECIDAE
Glyphidrilus, MORPH., 3289

LUMBRICIDAE
Allolobophora, TAX., 6810
Dendrobaena, TAX., 6811
Eisenia, HIST., MORPH., 5968; TAX., 6811
Eophila, TAX., 6811
Lumbricus, CYT., 5970

HIRUDINEA

HIRUDIDAE
CYT., 5970
Hirudinaria, HIST., 2474

ECHIURIDA

ECHIURIDAE
Echiurus, HIST., 6808
Urechis, EMB., 766, 4398, 17065

BRACHIOPODA · BRYOZOA · PHORONIDEA

BRACHIOPODA

(Classification according to Soguchert and LeVene, "Classification of Brachiopod Genera, Fossil and Recent" (1929).)
DIST., TAX., (J) 15943; TAX., 6819

NEOTREMATA

ACROTRETIDAE
PROTOTRETA, (Om) 6818

CRANIIDAE
Cardinocrania, TAX., (†) 12310

PROTREMATA

CHONETIDAE
ANOPLIOPSIS, (Cb) 3291

PRODUCTIDAE
Marginifera, TAX., (Cb) 3291
Productus, TAX., 3292
SETIGERELLA, N. SUBG., (†) 3292
WORTHENELLA, N. SUBG., (†) 3292

Waagenoconchia, DIST., (Pr) 5082

RICHTHOFFENIIDAE
Richtiofenia, TAX., (†) 12310

TELETREMATA

SPIRIFERIDAE
Spirifer, TAX., (D) 16001

ATHYRIDAE
Anathyris, TAX., (D) 16001

TEREBRATULIDAE
Terebratula, TAX., (D) 16001
TRIATHYRIS, (D) 16001
PRADOIA, (D) 16001

TEREBRATELLIDAE
Macandrevia, TAX., 16003
Trigonosema, TAX., 16002
WALDHEIMATHYRIS, N. NAME, 16003

BRYOZOA

(Classification according to R. S. Bassler, "Classification of Bryozoa, Fossil and Recent" (1932).)

ECTOPROCTA

CTENOSTOMATA
MONOBRYOZOONTIDAE
Monobryozoon, MORPH., 6820

PHORONIDEA

(Vacant)

ECHINODERMATA

EMB., 767; TAX., (J, Ter, Tr) 16007

PELMATOZOA

CRINOIDEA

DIST., TAX., (J) 15943

ACROCRINIDAE
Acrocrinus, TAX., (Cb) 10555

POTERIOCRINIDAE
Agassizocrinus, TAX., (Cb) 10555

CIBOLOCRINUS, TAX., (Cb) 10555
Delocrinus, TAX., (Cb) 10555

DIPHUICRINUS, (Cb) 10555
Ethelocrinus, TAX., (Cb) 10555
Hydrocrinus, TAX., (Cb) 10555

MORROWCRINUS, 10555
PARADELOCINUS, (Cb) 10555

PARAPLASOCRINUS, (Cb) 10555

PERIMESTOCRINUS, (Cb) 10555

PLAXOCRINUS, (Cb) 10555
SCIADIOCINUS, (Cb) 10555

SCYTHOCINUS, TAX., (Cb) 10555
STUARTWELLERCRINUS, (Cb) 10555

UTHAROCRINUS, (Cb) 10555
XYSTOCRINUS, (Cb) 10555
Zeacrinus, TAX., (Cb) 5113

ASTEROZOA

ASTEROIDEA

ASTERINIDAE
Patiria, HIST., 10551

BENTHOPECTINIDAE
Benthopecten, TAX., 14225

BRISINGIDAE
Freyella, TAX., 10552

ECHINODERMATA (Concluded) · MOLLUSCA

ECHINASTERIDAE
Poraniopsis, TAX., 10554

GANERIIDAE
ALEUTIASTER, 14224

HELIASTERIDAE
Heliaster, TAX., 14225

OREASTERIDAE
Nidorellia, TAX., 14225

OPHIUROIDEA

AMPHIURIDAE
Ophiactis, TAX., 10553

OPHIOLEPIDIDAE
Ophiura, TAX., (N) 5112

OPHIOTRICHIDAE
Ophiotrix, TAX., 10552, 10553

ECHINOZOA ECHINOIDEA

ARBACIIDAE
Arbacia, EMB., 4388, 4390,
8059, 8060; MORPH., 16006

CENTRECHINIDAE
Diademopsis, TAX., (Tr) 16007
Heterodiadema, TAX., (K)
14227

ECHINIDAE
Psammecinus, EMB., 9788,
11462

FIBULARIIDAE
Fibularia, TAX., (Ter) 16007

HEMIASTERIDAE
Hemiaster, TAX., (J) 16007

SALENIIDAE
Garella, TAX., 14225
Salenia, TAX., 14225

SCUTELLIDAE
Astriclypeus, EMB., 4397
Dendraster, EMB., 766, 5972,
17050

SPATANGIDAE
Micrasterias, TAX., 3293

HOLOTHURIOIDEA

OCUMARIIDAE
Pentacta, TAX., 3418
Phyllorhynchus, TAX., 3294
Thyone, HIST., MORPH., 5969;
TAX., 3294

HOLOTHURIIDAE
Holothuria, TAX., 3294
Labidodemas, TAX., 3294

INCERTAE SEDIS
(In Holothurioidea)
Auricularia, TAX., 16004
EUPHYLLOPHORUS, 3294
EUTHYONIDIUM, 3294
NEOTHYONIDIUM, 3294
Pattalus, TAX., 3294
Pentamera, TAX., 3294

MOLLUSCA

L. H., 3279, 8993; MORPH., 16011; TAX., 3299, 3300, 10562

AMPHINEURA

MORPH., PHYL., 16011

LEPIDOPLEURIDAE
Lepidopleurus, MORPH., 16011

ISCHNOCHITONIDAE
Callistochiton, TAX., 3295
Ischnochiton, TAX., 3295
Tonicella, MORPH., 16011

ACANTHOCHITONIDAE
Acanthochitona, MORPH., 16011
Lepidochitona, MORPH., 16011

CONULARIDA

TENTACULITIDAE
Tentaculites, TAX., (D) 10566

GASTROPODA

CYT., 4342, 7115, 8056;
DIST., TAX., (J) 15943;
HIST., 8062

DOCOGLOSSA

ACMAEIDAE
Acmaea, DIST., TAX., (J) 15943
Scaphiophylla, DIST., TAX., (J)
15943

RHIPIDOGLOSSA

PLEUROTOMARIIDAE
Murchisonia, TAX., (f) 14231
Orestes, TAX., 14231
PHYMATOPLEURA, (Cb)
14231
TAOSIA, TAX., (Cb) 14231

FISSURELLIDAE

Emarginula, DIST., TAX., (J)
15943

TURBINIDAE

Astrarium, TAX., (Pl) 16010
Eucyclus, DIST., TAX., (J) 15943
Leptothyra, TAX., (Pl) 16010

TROCHIDAE

Calliostoma, TAX., (Pl) 16010

HELICINIDAE

Hendersonia, DIST., 8745

TAENIOGLOSSA (NON-MARINE)

VIVIPARIDAE
Cyt., 8919
Paludina, TAX., 10565
Viviparus, TAX., 10567

TRUNCATELLIDAE

Oncomelania, TAX., 10557

MELANIIDAE

Cleopatra, TAX., 3297
Melania, TAX., 10565, (E) 16009

TAENIOGLOSSA-MARINE

ADORBITIDAE
Vitrinella, TAX., (Pl) 16010

NATICIDAE
Ampullina, TAX., 16008
Sinum, TAX., 6828

TURRITELLIDAE
Turritella, TAX., 5122, (Pl)
16010

PSEUDOMELANIIDAE
Chemnitzia, DIST., TAX., (J)
15943

Pseudomelania, TAX., 16008
Trajanella, TAX., (K) 16008

TAENIOGLOSSA-SIPHONATE
CERITHIIDAE
Campanile, TAX., (E) 10558

CASSIDIDAE
Semicassis, TAX., 6828

GYMNOGLOSSA
ENTOCONCHIDAE
Entocolax, MORPH., TAX., 5116

STENOGLOSSA
MURICIDAE
Purpura, L. H., 3303

MITRIDAE
Mitra, TAX., 6828

CANCELLARIIDAE
Cancellaria, TAX., 6828

CONIDAE
Conus, TAX., 6828

OPISTHOBANCHIA
EMB., 8054

LIMACINIDAE
Limacina, HIST., MORPH., 6822;
L. H., 5392, 10559

TETHYIDAE
Aplysia, EMB., 770

DUVAUCELIIDAE
Duvaucelia, MORPH., 8746

POLYCERIDAE
Polycera, MORPH., 8746

AEOLIIDAE
Eubrancheus, MORPH., 8746

LIMAPONTIIDAE
Limapontia, MORPH., 8746

BASOMMATOPHORA
LYMNAEIDAE

Limnaea, DIST., 12261; MORPH.,
TAX., 12313

STYLOMMATOPHORA

ACHATINELLIDAE
Achatinella, DIST., 8747

ARIONIDAE
Arion, L. H., 12182; MORPH.,
TAX., 5118

PUERONIDAE
Asperitas, TAX., 6825
COCKEANA, 5114

Diastole, TAX., 5114
KUSAIBA, 5114
Lamprocystis, TAX., 5114
Liardetia, TAX., 5114
MENDANA, 5114
Microcystis, TAX., 5114
PULALOA, 5114
Sasakina, TAX., 6825
Thapsia, TAX., 3297

LIMACIDAE
Agriolimnax, EMB., L. H., 1609;
L. H., 12182

ACHATINIDAE
Clavator, TAX., (E) 16009

OLEACINIDAE
Salasiella, TAX., 12316

HELICIDAE
Helix, TAX., 10567

CLAUSILIIDAE
Nenia, TAX., 10566
NENISCA, N. SUBG., 10566
PARANENIA, N. SUBG.,
10566

PELECYPODA

DIST., TAX., (J) 15943;
TAX., 12315

FILIBRANCHIA

ARCIDAE
Anadara, TAX., 6828
Arca, HIST., 5884; MORPH.,
10560; TAX., 6828

MYTILIDAE

Modiolus, MORPH., 10560
Mytilus, MORPH., 10560
Septifer, MORPH., 10560

AMBONYCHIIDAE

Allonychia, DIST., TAX., (O)
3234

PECTINIDAE

Chlamys, TAX., 6828

DIMYIDAE

Dimyodon, DIST., TAX., (J)
15943

ANOMIIDAE

Heteranomia, MORPH., 3301
Placunopsis, DIST., TAX., (J)
15943

EULAMELLIBRANCHIA

OSTREIDAE
Gryphea, L. H., 14406
Ostrea, L. H., 5407, 7240, 10805,
10808, 12631, 14406

PINNIDAE

Pinna, MORPH., 10560

DREISSENIDAE

Dreissena, MORPH., 10560

PLEUROPHORIDAE
Anisocardia, DIST., TAX., (J)
15943
Cypricardia, DIST., TAX., (J)
15943

ASTARTIDAE
Opisoma, DIST., TAX., (J) 15943

LEPTONIDAE
Mysella, MORPH., 3301

SPHAERIIDAE
Pisidium, TAX., 6420

UNIONIDAE
TAX., 8743, 8744
Margaritana, DIST., 14394

CARDIIDAE
Cardium, DIST., TAX., (J)
15943; MORPH., 3301

TRIDACNIDAE
Hippopus, MORPH., 10560
Tridacna, MORPH., 10560

VENERIDAE
Antigona, TAX., 6828
Chione, TAX., 6828
Paphia, TAX., 1612
Venus, L. H., 9055

TELLINIDAE
Tellina, TAX., 6828

SEMELIDAE
Cumingia, CYT., 12512
Semele, TAX., 6828

SOLENIDAE
Cultellus, MORPH., 3301
Ensis, MORPH., 3301
Psammosolen, TAX., 6828

SAXICAVIDAE
Hiattella, MORPH., 3301

GASTROCHAENIDAE
Gastrochaena, TAX., 6828

PHOLADIDAE
Barnea, MORPH., 3301
Pholadidea, MORPH., 3301
Pholas, HIST., 5884

TEREDINIDAE
Bankiella, HIST., 5884
Teredo, MORPH., 3301

CEPHALOPODA

NAUTILOIDEA
Aturia, MORPH., 5119
Zittiloceras, TAX., (O) 10561

AMMONOIDEA
LIPAROCERATIDAE
TAX., (J) 7742
Anthracoeras, TAX., 8741
PLATYNOTICERAS, (J) 8742

DIBRANCHIA
LOLIGINIDAE
Loligo, L. H., 1611

OTOPODIDAE
Eladone, HIST., 703
Octopus, HIST., 703
Polypus, L. H., 1610

ARTHROPODA

BIBL., 3238; MORPH., 9790; PHYL., 1694, 12333

MYRIOPODA · ONYCHOPHORA

MYRIOPODA

TAX., 5124

SYMPHYLA

Symphylella, TAX., 8798

DIPLOPODA

ONYCHELIDAE, N. FAM., 6829

ONYCHELIDAE
Onychelus, TAX., 6829POLYDESMIDAE
Polydesmus, TAX., 16014CHELODESMIDAE
Amphelictogon, TAX., 5124CRYPTODESMIDAE
ENELISSOMINAE, 12319;
MAURITACANTHINAE, N.
SUBFAMS., 12319
HYSTRICODESMUS, TAX., 5124COMODESMIDAE
TAX., 5124VANHOEFFENIIDAE
TAX., 5124STRONGYLOSOMIDAE
LEIOMODESMUS, 5124OXYDESMIDAE
TAX., 8748
Kamerunomus, TAX., 8748
Odontokrepis, TAX., 8748
Paracordylorpus, TAX., 8748
Scolopopleura, TAX., 8748CRASPEDOSOMIDAE
Ceratoma, TAX., 16014
Craspedosoma, TAX., 16014OROBAINOSOMIDAE
Orobainosoma, TAX., 16014JULIDAE
LeptoJulus, TAX., 16014SPIROBOLIDAE
Cubobolus, TAX., 5124
Microspirobolus, TAX., 5124RHINOCRICIDAE
Rhinoericus, TAX., 5124, 6829TRIGONIULIDAE
Spirostrophus, TAX., 5124SPIROSTREPTIDAE
MORPH., 16013AETHIOPISTREPTUS, 8749
Attemostreptus, MORPH., TAX., 16013Charactopygus, TAX., 6832
HARPAGOPHORIDAE
Thyropygus, TAX., 8749EPINANNOLENIDAE
Epinannolene, TAX., 5124INCERTAE SEDIS
(In Diplopoda)
Cubocricus, TAX., 5124
Cubodesmus, TAX., 5124
DARLINGTONIELLA, 5124
Plusiopus, TAX., 8749
Prostemmiulus, TAX., 5124

CHILOPODA

PHYL., 1694

HIMANTARIIDAE
Stigmatogaster, TAX., 6831GEOPHILIDAE
Brachygeophilus, TAX., 5123
Gosiphilus, TAX., 5123LEPTODAMPIUS, 5123
Meinertophilus, TAX., 6832CHILENOPHILIDAE
Chilenophilus, TAX., 6831LINOTAENIIDAE
Paraplanes, TAX., 6829
Scolioplanes, TAX., 6831SCOLOPENDRIDAE
Scelopendra, TAX., 6829LITHOBIIDAE
Lithobius, TAX., 6830, 6832PTERYGOTERGIDAE
Pterygotergum, MORPH., 16012ETHIOPOLIDAE
Bothropylus, TAX., 6830
Polybothrus, MORPH., 16012INCERTAE SEDIS
(In Chilopoda)Newportia, TAX., 6831
Schizotergitus, MORPH., 16012

ONYCHOPHORA

(Vacant)

CRUSTACEA

DIST., TAX., (J) 15943; MORPH., 8063, 8064; PHYL., 12333; Entomostraca, DIST., 16016

BRANCHIOPODA

ANOSTRACA

CHIROCEPHALIDAE
Chirocephalus, DIST., TAX., 16016; MORPH., 1615

CLADOCERA

DIST., 12319A

CALYPTOMERA

OTENOPODA

SIDIDAE
Diaphanosoma, TAX., 12319A
Latonopsis, TAX., 12319A
Pseudosida, TAX., 12319A

ANOMOPODA

DAPHNIDAE
Ceriodaphnia, TAX., 12319A
Daphnia, DIST., 12319A, 16016
Moina, TAX., 12319AMACROTHRICIDAE
Macrothrix, TAX., 6834, 12319ACHYDORIDAE
Alona, TAX., 12319A
Alonella, TAX., 12319A

GYMNOMERA

ONYCHOPODA

POLYPHEMIDAE
Bythotrephes, TAX., 10571

OSTRACODA

DIST., (Cb) 8680

PODOCOPA

CYPRIDAE
Candona, TAX., 6846, 8755
Chlamydotheca, DIST., 12320
Cypridopsis, DIST., 12320
Cypris, DIST., TAX., 16018
Heterocypris, DIST., TAX., 16018CYTHERIDAE
Cytherideis, TAX., 6845
Cytheropteron, TAX., (E) 8758

Gomphocythere, DIST., TAX., 10569

Limnocythere, TAX., 10569
Microcytherura, TAX., 6845
ONYCHOCYTHERE, 17973
PSEUDOLIMNOCYTHERE, 6846

COPEPODA

TAX., 8499

EUCOPEPODA

CALANOIDA

DIAPTOMIDAE
TAX., 14235
Arctodiaptomus, TAX., 6841, 12324, 16016
Diaptomus, DIST., 16016; MORPH., 10568; TAX., 6842, 6844
Eudiaptomus, TAX., 6842
Hemidiaptomus, TAX., 6841, 8753
Pseudodiaptomus, TAX., 14235, 17969
PSEUDODIAPTALLOUS, N. SUBG., 17969
Sinodiaptomus, TAX., 6843
Thermocyclops, TAX., 6839, 12323A

HARPACTICOIDA

CANTHOCAMPTIDAE
Arcticocamptus, TAX., 8751
Attheyella, TAX., 8751
Leptosyllus, TAX., 12331
Moraria, DIST., 17968
Paramesochra, TAX., 12331CYLINDROPSYLLIDAE
Parastenocaris, TAX., 6836, 6840LONGIPEDIIDAE
CHAPPUISIUS, 8754THALESTRIDAE
Parathalestris, TAX., 6835

CYCLOPOIDA

OLAUSIIDAE
Mytilicola, DIST., MORPH., 16017; TAX., 8310CYCLOPIDAE
Acanthocyclops, TAX., 6838
Diacyclops, L. H., 3202
Haliacyclops, TAX., 8753
Macrocyclus, PHYL., 6837
Mesocyclops, TAX., 8753
Metacyclops, TAX., 6838
Specocyclops, TAX., 6838
Tropocyclops, TAX., 6844CYCLOPINIDAE
TAX., 8757

NOTODELPHYOIDA

DOROPYGIDAE
Doropygus, TAX., 8752

CALIGOIDA

CALIGIDAE
Caligus, MORPH., 12332APENNELIDAE
Pennella, DIST., 6795

LERNAEOPODOIDA

LERNAEOPODIDAE
Achtheres, DIST., L. H., 3396SPHYRIIDAE
Sphyrium, DIST., TAX., 16019

BRACHIURA

ARGULOIDA

ARGULIDAE
Argulus, TAX., 16020

CIRRIPEDIA

THORACICA

BALANOMORPHA

BALANIDAE
Acasta, MORPH., 10572
Balanus, L. H., 10796; TAX., 14236CHTHAMALIDAE
Chthamalus, L. H., 10796; MORPH., 10572

MALACOSTRACA

PERACARIDA

MYSIDACEA
DIST., 16022; TAX., 17972

ISPODA

VALVIFERA

IDOTHEIDAE
Idotea, EMB., 9794; EMB., MORPH., 12323

ASELLOTA

ASELLIDAE
Asellus, EMB., 11470; HIST., 5126; TAX., 12329

EPICARIDEA

BOPYRIDAE
Pseudione, TAX., 12321

ONISCOIDEA

ONISCIDAE
Oniscus, HIST., 5126
Platyarthrus, HIST., 5126; TAX., 12336
Protracheoniscus, TAX., 8750

PORCELLIONIDAE

TAX., 8761
Metoponorthus, TAX., 8761
Porcellio, CYT., 52; EMB., 9783; HIST., 5126; MORPH., 1613; TAX., 8761ARMADILLIDAE
Armadillidium, EMB., 9783
Troglarmadillidium, TAX., 12336TRICHONISCIDAE
Androniscus, HIST., 5126; TAX., 10574Cyphoniscellus, TAX., 12336
Haplophthalmus, HIST., 5126
Illyrionethes, TAX., 8760, 10574
Schoblin, TAX., 10575
Termitoniscus, TAX., 10575
Titanethes, HIST., 5126
TEOGLOCYPHONISCUS, 12336

CRUSTACEA (Concluded) · ARACHNIDA · COLLEMBOLA

AMPHIPODA
GAMMARIDEA
 TAX., 3307
HAUSTORIADA
 Bathyporeia, L. H., 10798; TAX., 3309

PHOXOCEPHALIDAE
 Pontharpinia, TAX., 3308

GAMMARIDAE
 Gammarus, TAX., 3308, 12334
NIPHARGELLUS, 6849
 Niphargus, TAX., 6849

PHOTIDAE
 Leptocheirus, L. H., 10795

SCINIDAE
 Scina, TAX., 16015
VIBILIIDAE
 Vibilia, TAX., 16015

EUCARIDA

EUPHAUSIACEA
 TAX., 17972

DECAPODA

NATANTIA

PENAEIDAE
 Penaeus, L. H., 12631

CARIDEA
ATYIDAE
 Atya, TAX., 12326
 Caridina, TAX., 12326
NEOCARIDINA, 12326

PALAEMONOIDA

PALAEMONIDAE
 Leander, EMB., 11470

REPTANTIA

ASTACURA

HOMARIDEA
 MORPH., 1614
PARASTACIDAE
 TAX., 17967
 Engaeus, TAX., 17967
 Parastacoides, TAX., 17967

ASTACIDAE
 Cambarus, CYT., 5970
 Potamobius, MORPH., 9674

ANOMURA

THALASSINIDEA
 MORPH., TAX., 1614

PAGURIDEA

PAGURIDAE
 Pagurus, TAX., 3413
 Palaepagurus, DIST., TAX., (J) 15943

BRACHYURA
GYMNOPLEURA
RANINIDAE
 Ranina, TAX., (E) 12335

DROMIACEA
DROMIIDEA
PROSOPONIDAE
 Prosopon, DIST., TAX., (J) 15943

OXYSTOMATA
CALAPPIDAE
 Calappa, TAX., (E) 12335

BRACHYGNATHA
BRACHYRHYNCHA
PORTUNIDAE
 TAX., 6848

Callinectes, DIST., 3381
 Charybdis, TAX., 6848
GONIOINFRADENS, N.
 SUBG., 6848
GONIOSUPRADENS, N.
 SUBG., 6848

CANCROIDAE
 Cancer, TAX., (E) 12335

GRAPSIDAE
 Eriocheir, MORPH., 12332

OXYRHYNCHA
PARTHENOPIIDAE
 Harrovia, TAX., 1616
 Tutankhamen, TAX., 1616

MAJIDAE
 Achaeus, TAX., 1616
 Choniognathus, TAX., 1616
 Cyrtomaja, TAX., 1616
 Hyastenus, TAX., 1616
 Leptopisa, TAX., 1616
 Pisoides, TAX., 1616
 Pugettia, TAX., 1616
 Xenocarcinus, TAX., 1616
 Zewa, TAX., 1616

INCOERTAE SEDIS
 (In Oxyrhyncha)
ASTEROLAMBEUS, 1616
NEORHYNCHOPLAX, 1616

HOPLOCARIDA

STOMATOPODA

CHLORIDELLIDAE
 Chloridella, TAX., (K) 14238

TRILOBITA

TRINUCLEIDAE
 Cryptolithus, DIST., TAX., (O) 3234

INCOERTAE SEDIS
 (In Crustacea)
 Suevocythia, DIST., TAX., (J) 15943

XIPHOSURA · EURYPTERIDA · ARACHNIDA · PYCNOGONIDA · LINGUATULIDA · TARDIGRADA

XIPHOSURA

(Vacant)

EURYPTERIDA

(Vacant)

ARACHNIDA

SCORPIONES

BUTHIDAE
 Bitis, L. H., 17988
PEDIPALPI
 Icterophrynus, TAX., 3321

CHELONETHIDA

NEOBISIIDAE
 Neobisium, TAX., 14241
 Leobisium, TAX., 6858
CHEIRIDIIDAE
 Arachneiridium, 6865

OPILIONES

LANIATORES
 HIST., 3320

TRIAENONYCHIDAE
 Aesulium, HIST., 3320
 Arifuga, HIST., 3320
 Arifugella, HIST., 3320

PALPATORES
 HIST., 3320

ISCHYROPALPIDAE
 Ischyropsalis, TAX., 6833, 14242

PHALANGIDAE
 Akaipa, TAX., 10583
CAGRELLOPSIS, 14243
 Roeweriolus, TAX., 6857

ARANEAE
MYCALOMORPHAE
CTENIZIDAE
 Otenizinae, TAX., 17984
 Actinoxia, TAX., 17984
CALISOGA, 17984
 Nemesia, TAX., 6847

DIPNEUMONOMORPHAE
AGELENIDAE
 Agelena, HIST., 6859
 Neotantistea, MORPH., 3317

LYCOSIDAE
 Acantholycosa, TAX., 10587
 Lycosa, TAX., 10587
 Pardosa, MORPH., 3317
 Schizocosa, CYT., 16162

THERIDIIDAE
 Latrodectus, DIST., L. H., 5069; TAX., 3319

ARGIOPIDAE
 TAX., 3318
 Aranea, TAX., 3318
 Argiope, TAX., 3318, 6860
 Eucta, TAX., 10587

SPARASSIDAE
 Heteropoda, TAX., 3318

THOMISIDAE
 Philodromus, TAX., 17985

DRASSIDAE
 Drassodes, MORPH., 3317

ACARINA

TAX., 12340
ALLOLAELAPTIDAE, **NEOPARASITIDAE**, **VEIGATAIDAE**, N. FAMS., 12340

EUPODIDAE
 Rhagidia, TAX., 12341

TETRANYCHIDAE
 Metatetranychus, L. H., TAX., 5018

THROMBIDIIDAE
 Anomalothrombidium, TAX., 6851

EUSCHONGASTIA, 3314
EUTROMBICULA, 3314
 Gahrlepiea, TAX., 3314
GATERIA, 3314
HEMITROMBICULA, 3314
 Leeuwenhoekia, DIST., 17980
 Microthrombidium, TAX., 3314
 Neoschongastia, TAX., 17980
 Schongastia, TAX., 17980
 Trombicula, TAX., 17980
 Walchia, TAX., 17980

CAECULIDAE
 Caeculus, TAX., 10579

HYDRACHNIDAE
 Aturus, TAX., 10583
 Hydrphanthes, TAX., 1618
 Megapus, TAX., 1618
 Piona, TAX., 1618
 Pontarachna, TAX., 3315
 Protzia, TAX., 10583

ARGASIDAE
 Ornithodoros, DIST., 15296

IXODIDAE
 Amblyomma, TAX., 6854
 Geratixodes, TAX., 6856
 Ixodes, DIST., 1564, 5253, 14141, 15916; L. H., 5253, 14142, 15916; TAX., 6853

DERMANYSSIDAE
 Entonyssus, TAX., 17983
OPHIONEUMICOLA, 1617

PARASITIDAE
 Cyclolaelaps, TAX., 17983
GAMASODES, 12340
 Gamasus, TAX., 12340
 Ischnolaelaps, TAX., 17983
 Laelaps, DIST., L. H., 5231
 Macrocheles, TAX., 17982

Megisthanus, TAX., 3316
WILLMANNIA, 6852

ORIBATIDAE
 Cultoribula, TAX., 17982
 Oppia, TAX., 17982

PHTHIRACARIDAE
 Euphthiracarus, TAX., 17982
 Phthiracarus, TAX., 17982

TARSONEMIDAE
 Pediculoides, L. H., 1513, 10445
 Tarsonemus, DIST., L. H., 12191; L. H., 10416

TYROGLYPHIDAE
 Histiotoma, TAX., 17982
 Tyroglyphus, L. H., 10420

LISTROPHORIDAE
 Listrophoroides, TAX., 17983

SARCOPTIDAE
 Notoedres, MORPH., 6855

ERIOPHYIDAE
 Eriophyes, L. H., 10398

INCOERTAE SEDIS
 (In Acarina)
 Asca, TAX., 12341

PYCNOGONIDA (PANTOPODA)

(Vacant)

LINGUATULIDA

(Vacant)

TARDIGRADA

Echiniscus, TAX., 6861
 Hysibius, TAX., 6861, 6863

INSECTA

CYT., 14352; EMB., 3312, 17975; L. H., 1486; PHYL., 1694; TAX., 18039; **PHTHIRAPTERA**, N. ORDER, 18039

THYSANURA

MACHILIDAE
 Machilis, TAX., 12413

COLLEMBOLA

PODURIDAE
 Brachystomella, TAX., 14277
 Xenylla, TAX., 3363

ENTOMOBRYIDAE

Acanthurella, DIST., TAX., 3371
 Entomobrya, DIST., TAX., 3371; TAX., 14277
 Isotomina, TAX., 14277

Lepidocyrtinus, MORPH., 3368
 Pericrypta, DIST., TAX., 3371; TAX., 14277
 Tomocerus, DIST., TAX., 3371

SMINTHURIDAE
Arrhopalites, DIST., TAX., 3371
Sminthurides, TAX., 6943
DENISIELLA, N. SUBG.,
6943

INCERTAE SEDIS
(In Collembola)
TASMANURA, 3371
Trogolaphysa, TAX., 14277

PROTURA

TAX., 14280

PALAEODICTY-
OPTERA

LITHONEURA, (Cb) 3372

PROTORTHOPTERA

ADELONEURIDAE, N.
FAM. (Cb) 3372
ADELONEURA, (Cb) 3372

ORTHOPTERA

CYT., TAX., 6939
BLATTIDAE
PHYL., 1635
Blatta, L. H., 14276
Periplaneta, HIST., 4400;
MORPH., 7935, 16965
MANTIDAE
Mantis, CYT., 61

ACRIDIDAE
Asmara, TAX., 3366
Atractomorpha, TAX., 3366
Chortocetes, DIST., L. H.,
15929
Chortophaga, CYT., 56, 8912
Dissosteira, L. H., 14122
Locusta, HIST., MORPH., 9786
Melanoplus, CYT., 5970; DIST.,
1493, 1498; EMB., 13342,
17062, 17063; L. H., 14122
Parasphenia, TAX., 3366
Pyrgomorpha, TAX., 3366
SUCCINOTETTIX, 6940

TETTIGONIIDAE
Tachycines, EMB., 768, 17975;
L. H., 14114

GRYLLIDAE
Gryllotalpa, CYT., 7119
Gryllus, EMB., 17975; L. H.,
5027
Oecanthus, CYT., 51

ISOPTERA

PHYL., 1635

KALOTERMITIDAE
Kaloterms, L. H., 14107

RHINOTERMITIDAE
Reticulitermes, L. H., 1636;
TAX., (N) 3373

NEUROPTERA

PLANIPENNIA
CHRYSOPTIDAE
Chrysopa, EMB., 17975

HEMEROBIIDAE
L. H., 10451

MANTISPIDAE
Anisoptera, TAX., 12409
PLATYMANTISPA, N. NAME,
12409

EPHEMERIDA

TAX., 12410
Iron, TAX., 12410
Oligoneuria, TAX., 6938

ODONATA

CYT., 14352; L. H., 1830
ARCHAEOPODAGRION, 16047
Cordulia, HIST., 2477
Enallagma, DIST., 3360
Epiophlebia, MORPH., 16045
Libellula, TAX., 12402
Macromia, DIST., 3360
Platycnemis, EMB., 17975

PLECOPTERA

Eusthenia, MORPH., 3362, 3363,
3364
Pteronarcys, EMB., 9793
Stenoperla, MORPH., 3363

CORRODENTIA

Copeognatha, TAX., Psoco-
idea, TAX., Psocoptera,
TAX., 18039
Lachesilla, TAX., 12414
Trichadenotecnum, TAX., 12414

MALLOPHAGA

Heptapsogastriidae, MORPH.,
TAX., 3369

PHILOPTERIDAE
BIZARRIFRONS, 8797
Degeeriella, TAX., 8797
Goniodes, TAX., 6941, 18038
Lipeurus, TAX., 6941
Nirmus, TAX., 8797
Philopterus, TAX., 8797
Strongylocotes, DIST., TAX.,
3369

EMBIIDINA

DIST., PHYL., 6942
Metoligotoma, TAX., 6942
Oligotoma, TAX., 6942, 14278

THYSANOPTERA

TAX., 12415, 18033
Aelothrips, TAX., 5148
Frankliniella, DIST., TAX., 3367;
L. H., 3367, 10409
Heliothrips, L. H., 8669
Hereothrips, L. H., 12198
Neohegeria, TAX., 18034
Scirtothrips, DIST., L. H., 17854
Scolothrips, DIST., L. H., 10446
Thrips, L. H., MORPH., 3181

ANOPLURA

HAEMATOMYZIDAE
Haematomyzus, TAX., 12416
Hoplopleura, DIST., L. H., 5231

HEMIPTERA

DIST., 10407; TAX., 1627,
8763

CORIXIDAE
CYT., 7122

Corixa, CYT., 1731
Cymatia, CYT., 1731
Graptocorixa, TAX., 16035
Micronecta, TAX., 3343, 12379,
12380
Sigara, CYT., 1731

NOTONECTIDAE
Anisops, TAX., 12380
Notonecta, EMB., 17975

NAUCORIDAE
Naucoris, MORPH., 10602

GERRIDAE
Potamobates, 16036

MIRIDAE
Horcias, DIST., TAX., 12190
Lygus, L. H., 12177, 15907
Psallus, L. H., 5029, 12230
Strongylocoris, TAX., 12378

ANTHOCORIDAE
Triphleps, DIST., TAX., 1627

CIMICIDAE
Cimex, L. H., 18012, 18013

NABIDAE
Nabis, EMB., HIST., 2476

REDUVIIDAE
TAX., 6909
Peregrinator, L. H., 10453
Rhincoris, EMB., HIST., 2476

PHYMATIDAE
Phymata, L. H., 10601

PIESMATIDAE
Piesma, L. H., 8665

TINGITIDAE
Gargaphia, TAX., 12377
Leptodictys, TAX., 12377
Leptopharsa, TAX., 12377
Phatnoma, TAX., 12377

LYGAEIDAE
Eremocoris, CYT., 14353
Lygaeus, CYT., 14353; EMB.,
HIST., 2476
Macrotelus, TAX., 14259
SINOSILLUS, 6913

ARADIDAE
Alydus, CYT., 5299

CORIZIDAE
Corizus, L. H., 12198

COREIDAE
Leptocoris, L. H., 1488
Pseudophloeus, TAX., 14259
Syromastes, EMB., HIST., 2476

PENTATOMIDAE
Murgantia, HIST., MORPH., 3342
Nezara, DIST., L. H., 5068
Solubea, DIST., L. H., 12185

HOMOPTERA

Jassoidae, PHYL., TAX.,
18017; Bythoscopidae,
TAX., 18017; AGALII-
DIDAE, AUSTROAGAL-
LOIDIDAE, IDIOCEBI-
DAE, MACROPSIDAE,
TARTESSIDAE, and
THYMESIDAE, N. FAMS.,
18017

FULGORIDAE
TAX., 3345, 8785

Amblycraus, TAX., 8785
Anotia, TAX., 8785

ATHESON, 8785
Bothriocera, TAX., 8785
CATONOIDES, 8785
Crepuscia, TAX., 8785

Cyrpoptus, TAX., 8785
Delphax, TAX., 18014
Derbe, TAX., 8785

Enchophora, TAX., 6916
Euphanta, L. H., 14107
Euricania, L. H., 14107

FLATULOIDES, 8785
KALDOPOCEPHALUS, 8785
KOLOPTERA, 8785

Lappida, TAX., 8785
Liburnia, TAX., 18014
Megamelus, DIST., 3181, 3182

MELOEMENIS, 8785
MESSOIDES, 8785
Monofata, TAX., 8785

MUIBILIXIUS, 8785
MUIBOLONIA, N. NAME, 8785
Mysidia, TAX., 8785

Neocenchrea, TAX., 8785
Olonia, TAX., 8785
Ormenis, TAX., 8785

Phricus, TAX., 8785
Picumna, TAX., 8785
Pintalia, TAX., 8785

PLATONAX, 8785
Plectoderes, TAX., 8785
PSEUDOMYSIDIA, 8785

RHOTELLA, 8785
Syntames, TAX., 8785
Thionia, TAX., 8785

THIONIAMORPHA, 8785
THIONIELLA, 8785
THIONISSA, 8785
VANUOIDES, 8785
Vutina, TAX., 8785

CICADIDAE
Okanagana, DIST., 1628
Tibicen, L. H., 1628

CICADELLIDAE
TAX., 1629

Aceratagallia, L. H., 17880
BAKERIOLA, N. NAME, 18016
Chlorotettix, TAX., 1629
Cicadella, TAX., 18016
Deltocephalus, TAX., 16038,
18016

DIEMOIDES, 18016
Dikraneura, TAX., 1629
Empoasca, L. H., 12198; TAX.,
10604, 18017, 18021

EUACANTHELLA, 18016
EUPROEA, 18016
Eutettix, DIST., L. H., 8645,
12186; TAX., 18016

Graphocephala, DIST., 17881
Hebecephalus, TAX., 16038
Hecalus, TAX., 18016
Ipocerus, TAX., 18016

Kana, TAX., 18016
Koebelia, TAX., 18017
Laeviccephalus, TAX., 1629,
16038

Lonatura, TAX., 16037
Macropsis, DIST., L. H., 10390
Memnonia, TAX., 16038
Nirvana, TAX., 18016

Oliarus, TAX., 8785
Ophiuchus, TAX., 18016
ORIENTUS, 1629
Parabolocatus, TAX., 3346,
16038

Phlepsius, TAX., 1629
Phrynophyes, TAX., 18016
Reuteriella, TAX., 18016
TASMANOTETTIX, 18016

Thannotettix, TAX., 18016
Xestoccephalus, TAX., 18016

CERCOPIDAE
Lepyronia, TAX., 6916

MEMBRACIDAE
Stictoccephala, L. H., 6915A

CHERMIDAE
Arytaina, TAX., 1631
LEVIDEA, 1631

Paratrioza, DIST., 10415; L. H.,
8984
Psylla, TAX., 1631
Rhinopsylla, MORPH., 1631
Triozia, TAX., 1631

APHIDIDAE
EMB., 9789
Adelges, L. H., 3198
Amphorophora, L. H., 8638;
TAX., 16039

Aphis, DIST., 1489; TAX., 3348
Dreyfusia, DIST., 14129; L. H.,
1511, 14129
Eriosoma, L. H., 1492, 17855
Kakimia, TAX., 8786

Lachnus, L. H., 8648
Macrosiphium, DIST., L. H.,
10451; EMB., 13349; HIST.,
6918; TAX., 16039

Micromyzus, L. H., 12184
Mindarus, TAX., 18015
Rhopalosiphum, L. H., 3476,
17874

ALFYRODIDAE
Bakerius, TAX., 12381
Bemisia, L. H., 12198
Trialeurodes, TAX., 3344

COCCIDAE
TAX., 18019
ANNULASPIIS, 10605
Antonina, DIST., 3186

Aonidomytilus, TAX., 10605
ASPIDASPIIS, 10605
Aspidiotus, DIST., 17861; L. H.,
8669, 17861

Asterolecanium, TAX., 14263
CHORTINASPIIS, 10605
Chrysomphalus, TAX., 10605

Circulaspis, TAX., 10605
Clavaspis, TAX., 10605
Dactylaspis, TAX., 10605

Diapridiotus, TAX., 10605
Epidiaspis, TAX., 10605
Eriococcus, TAX., 8784

Hemiberlesia, TAX., 6917, 10605
Laccifer, L. H., 14102
Lecanium, TAX., 3347

Lepidosaphes, L. H., 8983
LYRASPIIS, 10605
Mesolecanium, DIST., 17859

NUCULASPIIS, 10605
Quadraspidotus, TAX., 10605
RADIASPIIS, 10605
Rugaspidotus, TAX., 10605

HOMOPTERA (Concluded) · ADEPHAGA · LEPIDOPTERA

Sacchiphantes, TAX., 10606
Saissetia, DIST., 15898; L. H.,
10448, 15898

DERMAPTERA

Bormansia, HIST., 14282

COLEOPTERA

EMB., 765; TAX., 8763,
10593

ADEPHAGA

CARABOIDEA
CICINDELIDAE
Amblycheila, TAX., 17991
Cicindela, TAX., 6883, 12346

CARABIDAE
Abaris, TAX., 10597
Aphaenops, TAX., 12345
Bembidion, TAX., 12343
Disphaericus, TAX., 3322
IBLANIA, 5130
Metabacetus, TAX., 3330
Nebria, TAX., 17992
Oreonebria, TAX., (J) 3327
Perileptus, TAX., 8770
Pterostichus, L. H., 10454

DYTISCIDAE
Agabus, TAX., 12347
Canthyrus, TAX., 10589
Copeletus, TAX., 6874
Hydrovatus, TAX., 10589
Laccophilus, TAX., 10589

POLYPHAGA

HYDROPHILOIDEA
HYDROPHILIDAE
Helophorus, L. H., 3202

STAPHYLINOIDEA
SCYDMAENIDAE
Euconnus, TAX., 6880, 14246
Stenichnus, TAX., 6880

STAPHYLINIDAE
Aleochara, L. H., 8776
Atheta, TAX., 6886
BRACHYCANTHARUS, 6867
Brachyera, TAX., 6867
Calodera, TAX., 6866
DIABOLIGENUS, 6867
Domene, DIST., (J) 3327
Euvira, TAX., 6867
Genosema, TAX., 6867
Homalota, TAX., 6867
MICROBRACHIDA, 6867
NEOBRACHYCHARA, 6867
Paraplesius, TAX., 6882
Parasilusa, TAX., 6867
Philonthus, TAX., 3326, 6866
PHILONTHELLUS, N.
SUBG., 6866
Platandria, TAX., 6867
Platonica, TAX., 6867
Quedius, TAX., 17998
Sipalia, TAX., 3325
TRICHOIDEYAS, 6867
Trogophloeus, TAX., 6866

PSELAPHIDAE
Bilboletus, TAX., 12343

HISTERIDAE
TAX., 6888, 16029
Dendrophilus, TAX., 16029
Hister, L. H., 15897; TAX., 6888
Saprinus, TAX., 6883, 10596

CANTHAROIDEA
CANTHARIDAE
Malthodes, TAX., 3332

MELYLIDAE
Astylus, L. H., 6699
Attalus, TAX., 3332
Collops, L. H., 5066
Haploemus, TAX., 3332
Listrus, TAX., 6868
Malachius, TAX., 17994

CLERIDAE
Ichne, TAX., 14245
Priocera, TAX., 14245

MORDELLOIDEA
MELOIDAE
Ceroctis, TAX., 14249

ELATEROIDEA
ELATERIDAE
Anchastus, TAX., 6883, 8766
Conoderus, TAX., 8777
Eanus, TAX., 6877
Horistonotus, DIST., L. H., 5041
Limoniis, L. H., 10406; TAX.,
17995
Ludius, L. H., 12203; TAX.,
10591, 14244
Melanoxanthus, TAX., 8766
Monocrepidius, L. H., 15897
Simodactylus, TAX., 8766

MELASIDAE
Fornax, TAX., 6873

BUPRESTIDAE
Acmaeodera, TAX., 5131, 14245,
17999
Agrilus, TAX., 14245
Anthaxia, TAX., 3331, 12356
Buprestis, TAX., 17993
Dicerca, TAX., 8768
Schizopus, TAX., 17990
Stigmodera, TAX., 6872

DASCILLOIDEA
HELODIDAE
(CYPHONIDAE)
Cyphon, TAX., 3329
Ptilodactylus, TAX., 3329

CUCUJOIDEA
OSTOMIDAE
Temnochila, TAX., 6883

COCCINELLIDAE
L. H., 10451; MORPH., 3334
Adonia, TAX., 14250

TENEBRIONOIDEA
ALLECULIDAE
Allecula, TAX., 16031
Synallegula, TAX., 16031

TENEBRIONIDAE
Belopus, TAX., 12351
Boletothaphus, L. H., 16030
Coelus, TAX., 12342
Tenebrio, EMB., 17975
Tribolium, L. H., 16249

MELANDRYIDAE
Eustrophinus, TAX., 16031

BOSTRICHIDAE
ANOBIIDAE
MORPH., 14247

BOSTRICHIDAE
TAX., 17989
Dinoderus, L. H., 10453
Lichenophanes, TAX., 3328
Sinorylon, TAX., 6879

CISIDAE
TAX., 8780
Cis, TAX., 8780
POLYNESICIS, 8780

LYCHIDAE
TAX., 17989
Lyctus, L. H., 3197

SCARABAEOIDEA
SCARABAEIDAE
TAX., 5134
Aphodius, TAX., 12352, 12353
Canthon, HIST., 3328
Deltocilium, TAX., 5134
Melolontha, DIST., 12201; L. H.,
12201, 14127, 14135,
15006
Neoryctes, TAX., 6883
Onthophagus, TAX., 14248
Parastasia, L. H., 14107
Phylalus, TAX., 6884
Gleocoma, TAX., 6881
Popillia, TAX., 6870
Popillia, DIST., 1485, 15901;
EMB., 8057

Stiphus, TAX., 12352
Stenaspis, TAX., 12350
LUCANIDAE
Pseudolucanus, TAX., 8764

CERAMBYCOIDEA
CERAMBYCIDAE
L. H., 16027; TAX., 8773,
16027
Acanthoderes, TAX., 6883
Aridaeus, TAX., 10595
Brachytia, TAX., 10595

Dictamnina, L. H., 14107
Distichocera, TAX., 10595
Ergates, DIST., 3324
Hylotrupes, L. H., 1511
Macrones, TAX., 10592, 10595
Monohamus, DIST., L. H., 14181;
TAX., 6883
Nenenia, TAX., 10595
NEOURACANTHUS, 10595
Penthea, TAX., 10595
Pentheochaetes, TAX., 5138
Phlyctaenodes, TAX., 10595
Ptychodes, L. H., 6694
Rhytiphora, TAX., 10595
Sceleocantha, TAX., 10595
Somatidia, TAX., 10595
SPERATA, N. NAME, 10592
Stenodontes, TAX., 6883
Sternotomiella, TAX., 8778
Stromatium, DIST., 14130; L. H.,
8651
Tragocerus, TAX., 10595
Uracanthus, TAX., 10595
Zygocera, TAX., 10595

CHRYSOMELIDAE
Agelastica, EMB., 771
Crioceris, DIST., 10411
Cryptoccephalus, TAX., 3329,
14249
Diabrotica, L. H., 17866
Donacia, TAX., 8775
Epitrix, L. H., 5032, 5038, 17870
Galerucella, DIST., 10433
Leptinotarsa, DIST., 12188
Melasoma, EMB., 13346
Melitonoma, TAX., 14249
Melixanthus, TAX., 14249
Plagioderia, L. H., 10447
Rhypharia, L. H., 14107

MYLABRIDAE
Zabrotes, L. H., 14386

CURCULIONOIDEA
PLATYSTOMIDAE
TAX., 8781
CISANTHREBUS, 8781
JOEANDREBUS, 8781
Melanopsacus, TAX., 8781
NESEONOS, 8781

CURCULIONIDAE
TAX., 12346
Anacentrinus, L. H., 5037
Anthonomus, TAX., 8769
Apion, TAX., 12349
Arniticus, TAX., 6875
BACCHARISEPHILA, 8769
Calandra, L. H., MORPH., 5047
Chalcodermus, L. H., 3180,
10414, 14118, 17866
CISSEOANTHONOMUS, 8769
Conotrachelus, L. H., 3173
Derelomus, TAX., 8769
Dereidiodes, TAX., 8779
Gasterocercodes, DIST., TAX.,
14116; L. H., 1497, 12195,
14116
Hellipus, TAX., 6875
IDOSAULUS, 8782
Idotasia, TAX., 12357
Listroderes, L. H., 6865A
Lixus, L. H., 5044; TAX., 16032
NEOPACHYTICHIUS, 8769
NEUTOENEUMA, 12348
Notiomimetes, TAX., 3333
Orochlesis, TAX., 16034
Orthorrhinus, DIST., 8636; L. H.,
8636, 14107
Panseopus, TAX., 6886
Pantomorus, TAX., 6882, 6883
Pantorhytes, DIST., 8636; L. H.,
8636, 14107

PARAMONIUS, 8769
Petalochilus, TAX., 8769
Phytotribus, TAX., 8769
PHYTOTRIBELLUS, N.
SUBG., 8769
Platyacus, L. H., 14107
Protostrophus, TAX., 6882
Psaldus, TAX., 3333
Rhytidoderus, L. H., 15934
Sitona, L. H., 5044
Storeus, TAX., 8779
Tyloderma, L. H., 15397
Udeus, TAX., 8769

SCOLYTOIDEA
SCOLYTIDAE (IPIDAE)
L. H., TAX., 16028
Chramesus, TAX., 10590
Cryptocarenum, TAX., 6885
Dendroctonus, DIST., 12207
Gnathotrichus, TAX., 6885
Hylastes, DIST., 15926

Hylurgopinus, DIST., L. H.,
10426
Myelophilus, L. H., 10429
Pityophthorus, L. H., 10429
Xyleborus, DIST., 8653; L. H.,
8647, 8653
Xyloterus, L. H., 1511

INCERTA SEDIS
(In Scolytoidea)
Dendrocanulus, TAX., 6885

STREPSIPTERA

(Vacant)

MECOPTERA

Panorpa, HIST., 2475; MORPH.,
5147

TRICHOPTERA

L. H., MORPH., 3361; TAX.,
12407

HYDROPSYCHIDAE
Hydropsyche, L. H., 15930

LIMNETHILIDAE
Enoicyla, L. H., MORPH., 12408

LEPIDOPTERA

MORPH., 3358, 10615,
10617, 16041, 16042; TAX.,
3356

MACROLEPIDOPTERA

PIERIDAE
Eurema, TAX., 6936
Pieris, L. H., 3206

NYMPHALIDAE
NYMPHALINAE
Argynnis, MORPH., 16042
Athena, L. H., 3367
Vanessa, L. H., 12183

RIODINIDAE
RIODININAE (ERYCININAE)
Apodemia, TAX., 5142

LYCAENIDAE
Chrysophanus, TAX., 8787
Lycaena, TAX., 8790

HESPERIIDAE
HESPERINAE
Erynnis, MORPH., 5141
Phocides, L. H., 3357; TAX.,
6932
Pholisora, TAX., 6932
SCHLAUSANA, 6932

PAMPHILINAE
Thespeius, TAX., 6932

TRAPEZITINAE
Anisynta, TAX., 5144
Hesperilla, TAX., 5144
Trapezites, TAX., 5144

MEGATHYMIDAE
Megathymus, TAX., 6932

SPHINGIDAE
Celerio, MORPH., 3358
Protoparce, DIST., 3189; L. H.,
5030, 5035, 5067
Sphinx, MORPH., 3358

SATURNIIDAE
Anthracia, L. H., 3223
Eriogyna, L. H., 3221
Hemileuca, MORPH., 5141
Teia, MORPH., 16042

BOMBYCIDAE
Bombyx, CVT., 1723, 1724;
EMB., 9796, 17060; L. H.,
3218, 8676; MORPH., 16042
Theophila, L. H., 3221

LASIOCAMPIDAE
Malacosoma, DIST., L. H., 10402,
15910; L. H., 15927;
MORPH., 16042

POECILOCAMPA, MORPH., 3358

AMATIDAE
MORPH., TAX., 16043
Cosmosoma, TAX., 12400
Dysauxes, HIST., 10617
Eurota, HIST., 10617
Syntomis, HIST., 10617

ARCTIIDAE
LITHOSINAE
Lithosia, L. H., 10430, 14138
Oenistis, L. H., 10430, 14138

ARCTINAE (incl. PHAEOPTERINAE)
Apantesis, MORPH., 16041
Hemihyalea, TAX., 5143

LYMANTRIIDAE
TAX., 8791
Lymantria, L. H., 3194, 3195,
10430, 14132; MORPH.,
3358
Orgyia, MORPH., 3358

AGARISTIDAE
Euthisanotia, MORPH., 5141

NOCTUIDAE
TAX., 3355
AGROTINAE
Chloridea, L. H., 12198
Heliothis, DIST., 3189; L. H.,
3205, 15899, 17868

HADENINAE (PHALAEINAE)
Cirphis, MORPH., 16042
Mamestra, MORPH., 3358
Tiracola, L. H., 14107

CUCULLINAE
Sympistis, TAX., 10616

ACRONICTINAE
Charaenae, DIST., L. H., 12182
Papaipema, TAX., 10614
Prodenia, CYT., 12513; DIST.,
3189; L. H., 14107
Septis, MORPH., 16042

ERASTINAE
Eublemma, L. H., 14102

CATOCALINAE
Alabama, L. H., 12198

PANTHEINAE
Panthea, L. H., 10430

HYPENINAE
Epizeuxis, TAX., 12394
Zanclognatha, TAX., 12394

THAUMETOPOEIDAE
Thaumetopoea, L. H., 8650

NOTODONTIDAE
Datana, MORPH., 5141

DIOPTIDAE
Phryganidia, EMB., 9782

GEOMETRIDAE
MORPH., 16042; TAX., 3355
ORNOCHROMINAE (MONOCTENINAE)
Alsophila, DIST., 10424; L. H.,
10424, 10425

LAURENTINAE (HYDRIOMENINAE)
Cheimatomia, DIST., L. H., 15910

GEOMETRINAE (BOARMINAE)
Bupalus, L. H., 10430
Milionia, DIST., L. H., MORPH.,
1506

MICROLEPIDOPTERA

PYRALIDAE
GALLERININAE
Achroia, L. H., 15937; MORPH.,
2478
Galleria, EMB., 18347; L. H.,
15937; MORPH., 2478

CRAMBINAE
Diatraea, L. H., 8669, 10459
SOCHOENOBINAE (MACROTHECINAE)
Scirpophaga, L. H., 8667

PHYCITINAE
TAX., 8792
ALBERADA, 8792
AMALAFRIDA, 8792
Cactoblastis, TAX., 8792
CAHELA, 8792
EREMBERGA, 8792

EPHESTIA, EMB., 9791; HIST.,
4401; L. H., 15937; MORPH.,
5145

Melitara, TAX., 8792
NANAIA, 8792
Olyca, TAX., 8792
Ozamia, TAX., 8792
Plodia, L. H., 15937
RUMATHA, 8792
SALAMBONA, 8792
SIGELGAI, 8792
Zophodia, TAX., 8792

NYMPHULINAE
Nymphula, L. H., 5039

PYRAUSTINAE
Pyrausta, DIST., L. H., 1494,
12189; L. H., 10418, 12229,
17867

COSSIDAE
Xyleutes, DIST., L. H., 15912

OLETHREUTIDAE
Carpocapsa, DIST., 14104; L. H.,
14104, 14113
Cydia, L. H., 10405
Polychrosis, DIST., L. H., 12174
Rhyacionia, L. H., 12206
Semasia, L. H., 15909

TORTRICIDAE
Ancylis, L. H., 1523
Argyrotaenia, L. H., 3172
Bulia, L. H., 10389
Tortrix, DIST., L. H., 15910

GELECHIIDAE
TAX., 16040
Bryotropha, TAX., 16040
Chionodes, TAX., 16040

EPILECHIA, 16040
FACULTA, 16040
FASCISTA, 16040
FILATIMA, 16040
FRISERIA, 16040
FRUMENTA, 16040
Gelechia, TAX., 16040
Gnorimoschema, DIST., 3189

KEIFERIA, 16040
Lita, TAX., 16040
Pectinophora, L. H., 12231
Platyedra, DIST., 3184; L. H.,
12198
Pseudochelaria, TAX., 16040

BLASTOBASIDAE
Holocera, L. H., 14102

CARPOSINIDAE
Carposina, L. H., 10458

COLEOPHORIDAE
Coleophora, DIST., L. H., 14109

PSYCHIDAE
Chlana, TAX., 6934
Cochliotheca, TAX., 6934
Lufia, DIST., 12576
Plateocetius, TAX., 6934

INCERTAE SEDIS
(In Lepidoptera)
Hematurga, L. H., 10430

DIPTERA

CYT., 8913

ORTHORHAPHA

NEMOCERA

BIBIONIDAE
Bibio, TAX., 12367
Plecia, TAX., (N) 3373
BLEPHAROCERIDAE
Curupira, TAX., 3338
Edwardsina, TAX., 3338
Liponeura, TAX., 3338

SIMULIIDAE
Simulium, L. H., 12364, 15930

TIPULIDAE

Atarba, TAX., 14251
Chionea, MORPH., 6891
Cryptolabis, TAX., 14251
Elephantomyia, TAX., 14251
Erioptera, TAX., 14251
Gonomyia, TAX., 14251
Hexatoma, TAX., 14251
Limonia, TAX., 14251
Molophilus, TAX., 14251
Shannonomyia, TAX., 14251
Teucholabis, TAX., 14251
Tipula, TAX., (N) 3373

PSYCHODIDAE

Phlebotomus, DIST., L. H., 1516;
TAX., 1619

CHIRONOMIDAE

MORPH., TAX., 6889; Chironominae, L. H., 9043; Orthocladiinae, L. H., 9043; Tanypodinae, L. H., 9043
Lauterborniella, TAX., 6900
Limnophyes, TAX., 6889
Micropsectra, TAX., 6889
Pontomyia, TAX., 3340
Psectrocladius, TAX., 6889
Pseudosmittia, TAX., 14258
Smittia, TAX., 6889
Tanytarsus, TAX., 6889

MYCETOPHILIDAE

Sciara, CYT., 5298, 8911; HIST.,
9780

CULICIDAE

CYT., 53; TAX., 18006
Aedes, DIST., 3202, 10435,
14138; L. H., 3202, 8658,
10435, 12214, 12221,
12224; TAX., 10435
Anopheles, DIST., 8701, 12210,
12226, 12227, 14138,
14140, 14143, 15913,
15970; EMB., 10490; L. H.,
1621, 5054, 8655, 8657,
8662, 10438, 10442, 12210,
12214, 12219, 12225,
12226, 14143, 15924;
MORPH., 12363, 18007,
18008; TAX., 3336, 3389,
12363, 12372, 14252,
15924
Culex, CYT., 3452; DIST., 14138,
14140; L. H., 8660, 12214,
12221; TAX., 6908
Janthinosoma, TAX., 12371
Psorophora, DIST., L. H., 12227
Theobaldia, DIST., 3202, 14138;
L. H., 3202

CECIDIOMYIDAE

L. H., 10451
Asphondylia, MORPH., 8606
Contarinia, L. H., 15903; TAX.,
18002
Neolasioptera, DIST., L. H.,
12194
Phytophaga, L. H., 17872
Rhabdophaga, EMB., 11464;
L. H., MORPH., 1625, 1626

BRACHYCERA

RHAGIONIDAE

Chrysothemis, TAX., (†) 6945
Electra, TAX., (†) 6945
Lophyrophorus, TAX., (†) 6945
Rhachicerus, TAX., (†) 6945
Solva, TAX., 5135, 6901
FORMOSOLVA, N. SUBG.,
6901

TABANIDAE

DIST., TAX., 1624
Catachlorops, TAX., 12370
Chrysops, DIST., 1624
Sziladynus, TAX., 3335
Tabanus, DIST., 1624; L. H.,
5039; TAX., 18010

STRATIOMYIDAE

Aulana, TAX., 6901
Cephalochrysa, TAX., 6901
Euparyphus, TAX., 18004
FORMOSAEGUS, 6901
Hermestia, DIST., 18011
Hoplacantha, TAX., 6901
Labostigmina, TAX., 14257
Odontomyia, TAX., 14257
Saidubella, TAX., 5135
Scolioptera, TAX., 6902

NEMESTRINIDAE

Trichopsidea, TAX., 6898

BOMBYLIIDAE

Cyrtomorpha, TAX., 6898
Exoprosopa, TAX., 6903
Lepidophora, TAX., 6903

ASILIDAE

DIST., PHYL., 1622
Asilus, TAX., (N) 5150
Ceratogopsis, TAX., (N) 5150
Hodophylax, TAX., 6905
Lestomyia, TAX., (N) 5150
Philonicus, TAX., (N) 5150
Senobius, TAX., (N) 5150
Senoprosopis, TAX., (N) 5150

DOLICHOPODIDAE

Asyndetus, TAX., 14256
Chrysosoma, TAX., 14256
Diaphorus, TAX., 14256
Paracilus, TAX., 14256
Sciopus, TAX., 14256
Symptenus, TAX., 14256
Thinophilus, TAX., 14256

PHORIDAE

Borophaga, L. H., 15988
Phora, L. H., 15940

CYCLORHAPHA

ATHERICERA

PIPUNCULIDAE
CHALARIINI, **DORY-**
LAINI, **NEPHROCEINI**,
N. TRIBES, 10598
Beckerias, TAX., 18000
Dorylomorpha, TAX., 10599
TOMOSVARELLA, 10598
Tomosvaryella, TAX., 10599

SYRPHIDAE

L. H., 10451; TAX., 6897
Asarkina, TAX., 6897
Baccha, TAX., 6895, 6897
Eristalis, TAX., 6895
Melanostoma, TAX., 6897
Paragus, TAX., 6897
Platycheirus, TAX., (N) 3373
Syrphus, DIST., 8649; L. H.,
8649, 10431; TAX., 6897
Toxomerus, TAX., 12376
Volucella, TAX., 6895
Xanthanetrus, TAX., 6897

ACALYPTRATAE

CONOPIDAE
Dulmannia, TAX., N. SP., 6890

AGROMYZIDAE

Agromyza, TAX., 12365
Dizygomyza, L. H., 3193
Liriomyza, DIST., L. H., 1500

DROSOPHILIDAE

Drosophila, CYT., 1695, 1696,
1725, 1736, 5297, 7112,
7118, 8914, 14351, 16163;
EMB., 8055, 8058, 8061,
9781, 9784, 13341, 17061,
17975; PHYL., 1620; TAX.,
6893, 18003

CHLOROPIDAE

Conioscinella, MORPH., 6892
Pseudogaurax, L. H., 5069

EPHYDRIDAE

Scatella, L. H., 18001

TRYPETIDAE

Anastrepha, TAX., 18009
LUCCAMAPHILA, 18009
Paroxyyna, DIST., L. H., 12193
Tephritis, TAX., 10600

ORTALIDAE

TAX., 14254, 14255
Achias, TAX., 14254
Achirosoma, TAX., 14254
ADAPSILIA, 14253
Cleithamia, TAX., 14254
CLEITAMOIDES, 14254
Diplochorda, TAX., 14255
Elassogaster, TAX., 14254
EPICERINA, 14253
Euprosopia, TAX., 14254
Euxesta, TAX., 6895
Lamprogaster, TAX., 14254
NEOHEMIGASTER, N. NAME,
14254
Phthalma, TAX., 14255
Plagiostenoptera, TAX., 14254
Pseudopicausta, TAX., 14254
PSEUDOCLEITAMIA, 14254
Pterogenia, TAX., 14254
Rivellia, TAX., 14254
Scholastes, TAX., 14254
Scotinoma, TAX., 14254

SAPROMYZIDAE

Griphoneura, TAX., 6895

SCIOMYZIDAE

Dictya, TAX., 12375, 14257
Tetanocera, TAX., 14257

CALYPTRATAE

MUSCIDAE

Delia, L. H., 5046
Glossina, DIST., 5064; L. H.,
8656
Gymnodia, TAX., 6895
Helina, TAX., 6894

DIPTERA (Concluded) · HYMENOPTERA · PROCHORDATA · ELASMOBRANCHII

Musca, L. H., 3201, 6705, 10473
Neodexiopsis, TAX., 6894
Phaonia, TAX., 6894

OESTRIDAE
Hypoderma, L. H., 5057, 12228

CALLIPHORIDAE
Calliphora, CYT., 7123; L. H., 12216

Chrysomya, L. H., 3201
Cochliomyia, DIST., 3203; L. H., 1519, 3202, 5058, 8659, 12212, 15918

Cynomyia, L. H., 12216
Lucilia, L. H., 5060
Phormia, L. H., 5058
Protocalliphora, DIST., 1564

SARCOPHAGIDAE
Goniophyto, TAX., 1623
Helicobia, TAX., 6907
Sarcophago, L. H., 12360, 15927

TACHINIDAE
TAX., 6896
Archytas, L. H., 3208
Crossosmia, L. H., 3224
Dexomyophora, TAX., 6895
Kessella, TAX., 3337
Metagonistylum, L. H., TAX., 15925
Parasetigena, L. H., 10452
Pthocera, TAX., 5135

INCERTAE SEDIS
(In Calyptratae)
Bessa, L. H., 12209

PUPIPARA
STREBLIDAE
TAX., 18005
Ascodipteron, MORPH., TAX., 18005
Raymondia, TAX., 18005
Trichobius, TAX., 3337, 18005

NYCTERIBIDAE
Basilia, L. H., 10443
Nycteribia, L. H., 10443

SIPHONAPTERA

Aspiopocroctis, TAX., 18085
Praoposylla, TAX., 14279
Xenoposylla, L. H., 1514; TAX., 14279

HYMENOPTERA

L. H., 1521, 8668; MORPH., 6930; TAX., 7070, 8763

SIRICIDAE
SIRICIDAE
Sirex, DIST., L. H., 15926

TENTHREDINOIDEA
TENTHREDINIDAE
Diprion, DIST., 12207, 14123; L. H., 10432, 12206, 14123
Lygaonematus, L. H., 10431
Pachynematus, L. H., 10431
Pikonema, DIST., L. H., 12209
Pteronurus, DIST., L. H., 1510

PAMPHILIDAE
Acantholyda, DIST., 14128, 14136; L. H., TAX., 14128

ICHNEUMONOIDEA
ICHNEUMONIDAE
Anaphes, L. H., 12230
Aptesis, TAX., 18025
Calliophanes, L. H., 12231
Delomerista, TAX., 18025
Ephialtes, L. H., 12231
Hyponotus, L. H., 18030
Ichneumon, DIST., 12182; L. H., 1634, 12182
Ischnus, TAX., 18025
Lamachus, TAX., 18025
Microplectron, L. H., 10432
Monoblastus, L. H., 12209
Nemeritis, L. H., 15937
Panargrops, TAX., 18025
Phygadeuon, TAX., 3351
Pristomerus, L. H., 14104
Prophanurus, DIST., L. H., 10459
Rhyssa, DIST., L. H., 15926
Spilocryptus, CYT., 16164; TAX., 18025
Thysiotorus, TAX., 18025

BRACONIDAE
Apanteles, L. H., 5067, 12231, 15937; TAX., 10458
Aphidius, DIST., L. H., 10451
Ascogaster, L. H., 10456
Diaeretus, L. H., 10451
Ephedrus, L. H., 10451
Habrobracon, L. H., 3353
Ichneutes, L. H., 12209
Lysiphlebus, DIST., L. H., 10451
Macrocentrus, L. H., 10456
Microbracon, L. H., 12231, 14109, 15997, 15937
Praon, L. H., 10451
Rhaconotus, TAX., 14269
Spathius, TAX., 14269
Stenobracon, L. H., 8667; TAX., 1522
Trioxys, L. H., 10451

SERPHOIDEA
Baes, DIST., L. H., MORPH., TAX., 5069
Calliceras, TAX., 12390
Microphanurus, DIST., L. H., 5068
Scelio, DIST., L. H., 15929

CYNIPOIDEA
Figitidae, L. H., 10451
Ibalia, DIST., L. H., 15926
Neuroterus, CYT., 14350; L. H., TAX., 13736

CHALCIDOIDEA
Callinimidae, MORPH., PHYL., 1632
Aphelinus, DIST., 10451; L. H., 10451, 17855
Brachymeria, L. H., MORPH., 3206
Callimome, MORPH., PHYL., 1632
Coccophagus, L. H., 14102
Dibrachys, L. H., 14268
Dinarmus, TAX., 14268
Diomorus, MORPH., PHYL., 1632
Ditropinutis, MORPH., PHYL., 1632
Diversinervus, L. H., 10448
Doirania, L. H., 8635
Ecdasma, MORPH., PHYL., 1632
Encarsia, L. H., 3207
Entedon, TAX., 14266
Erencyrtus, L. H., 14102
Eridontomerus, MORPH., PHYL., 1632
Erythmelus, L. H., 12230
Eupelmella, TAX., 14266
Eupelmus, L. H., 14102
Euplectrus, L. H., 3208
Eupteromalus, DIST., L. H., 5067
Eurydinota, L. H., 14109
Eurytoma, DIST., 17858; L. H., 1625, 17858; TAX., 14266
Horismenus, DIST., L. H., 5067
Hypopteromalus, DIST., L. H., 5067
Leefmansia, L. H., 8635
Marietta, L. H., 14102
Megastigmus, MORPH., PHYL., 1632
Monobaeus, MORPH., PHYL., 1632
Monodontomerus, MORPH., PHYL., 1632
Ormyrus, MORPH., PHYL., 1632
Parechthodryinus, L. H., 14102
Pleurotropis, DIST., 5067; L. H., 5067, 10447
Podagrion, MORPH., PHYL., 1632
Schizonotus, L. H., 10447
Spilochalcis, L. H., 12231
Tachardiaphagus, L. H., 14102
Tepperella, L. H., 5139
Tetracampe, DIST., L. H., 1510
Tetrastichus, L. H., 3204, 10447, 14102
Trichogramma, L. H., 12209
Zaglyptonotus, MORPH., PHYL., 1632

FORMICOIDEA
DIST., 3350, 18026
Acanthoponera, TAX., 14270
Aphaenogaster, TAX., 6922
Atta, DIST., L. H., 8354
Camponotus, L. H., 3488
Ceratophys, TAX., 14270
Discothyrea, TAX., 14270
Formica, DIST., TAX., 3350; L. H., MORPH., 10422
Leptothorax, TAX., 6922, 18031
Monomorium, L. H., 16250
Paratrechina, L. H., 16250
Pogonomyrmex, TAX., 6922
Thaumatomyrmex, TAX., 14270
WADEURA, 14270

CHRYSIDOIDEA
Holopyga, TAX., 12385

MUTILLOIDEA
MUTILLIDAE
Pseudomethoca, TAX., 18023

BETHYLIDAE
Perisierola, L. H., 12231

VESPOIDEA
Euparagia, TAX., 6919
Mischocyttarus, L. H., 12231
Odynerus, DIST., 3352; TAX., 3352, 14264, 18022
Polybia, L. H., 12231

SPHECOIDEA
Bembix, TAX., 10608
Euerceris, TAX., 6929

APOIDEA
Bombidae, TAX., 10611; Meliponidae, TAX., 6928
Anthidium, TAX., 1633
Apis, EMB., 13345, 17975; L. H., 8673; MORPH., 1538; TAX., 8673, 12384
Bombus, TAX., 5188, 12384, 18029
TANGUTICOMOMBUS, N. SUBG., 18029
Diadassa, TAX., 18024
Halictus, TAX., 6920, 6921, 14265
Hylaeus, TAX., 14265
Lithurgus, TAX., 6925
Megachile, TAX., 6926, 14265
Patera, TAX., 12389

PARTAMONA, N. SUBG., 12389
Trigona, TAX., 6928
PATERA, N. SUBG., 6928
PARATRIGONA, N. SUBG., 6928
PLEBEIA, N. SUBG., 6928
SCAUURA, N. SUBG., 6928

PROCHORDATA

EMB., MORPH., 10689; MORPH., PHYL., TAX., 8878
Ascidia, TAX., 6946
Ascidella, EMB., 9795
Ascopera, TAX., 6946
Caenagnesia, TAX., 6946
Chelyosoma, MORPH., 16415
Clona, EMB., 4389
Corella, TAX., 6946
Molgula, TAX., 6946

PARACYNTHIA, 6946
Paramolgula, DIST., TAX., 6946
Pyura, TAX., 6946

VERTEBRATA

DIST., 7052, (J) 15943; EMB., 9761, 15081; MORPH., 667, 5898, 9679, 11882, 16959

LEPTOCARDII · MARSIPOBRANCHII · OSTRACOPHORI · ARTHRODIRA
ELASMOBRANCHII · PISCES

(System of classification, in the main, according to Jordan, "A Classification of Fishes", (1923), with modifications from his later works. For Conodonts see under Conodonts in the subject index.)

LEPTOCARDII
AMPHIOXI
BRANCHIOSTOMIDAE
Amphioxus, EMB., 9761
Branchiostoma, CYT., 14354

MARSIPOBRANCHII
(CYCLOSTOMATA)
TAX., 12427

HYPEROARTIA
PETROMYZONIDAE
Entosphenus, TAX., 18041
Ichthyomyzon, L. H., 18046
Lampetra, L. H., 5152; TAX., 18041
Petromyzon, L. H., 9052

OSTRACOPHORI
ANTIARCHA
ASTEROLEPIDAE
Asterolepis, DIST., (D) 3235

ARTHRODIRA
DIST., (D) 3235
TEMNOTHORACI
HOMOSTEIDAE
Heterosteus, DIST., (D) 3235
Homosteus, DIST., (D) 3235

ARTHROTHORACI
COCCOSTEIDAE
Chelyophorus, TAX., (D) 12480

ELASMOBRANCHII
TAX., 12427
SELACHII
MORPH., 7946, 7947
CESTRACIONTES
HETERODONTIDAE
Heterodontus, MORPH., 4382

EDESTIDAE
Helicoprion, DIST., MORPH., 5162

EUSELACHII

HEMISCYLLIIDAE
Chiloscyllium, EMB., L. H., MORPH., 3379

CARCHARIIDAE
Carcharias, MORPH., 9701

LAMNIDAE
Carcharodon, DIST., 5157, 18050

ALOPIIDAE
Alopias, DIST., 3377

CETORHINIDAE
Cetorhinus, MORPH., 16048

GALEIDAE
Carcharhinus, DIST., 3381;
MORPH., 2445, 9701
Carcharias, MORPH., 2445
Mustelus, TAX., 6956, 10628

BATOIDEI

RAJIDAE
Raja, MORPH., 6951

DASYATIDAE
Dasyatis, DIST., 3381

PISCES

EMB., 15060; HIST., 9715;
L. H., 144, 146, 148, 150,
151; PHYL., 6971, 3808;
TAX., 12427

CROSSOPTERYGII

RHIPIDISTIA

HOLOPTYCHIDAE
Holoptychus, DIST., (D) 3235

MEGALICHTHYIDAE
Eusthenopteron, MORPH., PHYL., 5163
Tristichopterus, DIST., (D) 3235

ACTINISTIA

COELACANTHIDAE
MORPH., PHYL., TAX., (D) 6971
Euporosteus, TAX., 6971
Latimeria, MORPH., 18049
NESIDES, (D) 6971

DIPNEUSTA

SIRENOIDEI

LEPIDOSIRENIDAE
Lepidosiren, MORPH., 2437

ACTINOPTERI

PHYL., 8813; Teleostei,
HIST., 11411; MORPH., 661,
5895, 7946, 7947, 16988

CHONDROSTEI

PALAEONISCIDAE
BRACHYDEGMA, 10621
Canobius, TAX., (Cb) 8813
Mesopoma, TAX., (Cb) 8813
PROTEUBYNOTUS, (Cb) 8813
Rhadinichthys, TAX., (Cb) 8813,
(Cb) 16053

PLATYSOMIDAE
Mesolepis, TAX., (Cb) 8813
PARAMESOLEPIS, (Cb) 8813

ISOSPONDYLI

MACROPINNIDAE, N.
FAM., 10619

MACROPINNIDAE
MACROPINNA, 10619

ELOPIDAE
Elops, MORPH., 18045

OLUPEIDAE
Diplomystus, DIST., MORPH.,
(E) 5161
Harengula, TAX., 3387

Knightia, DIST., MORPH., (E)
5161; TAX., (Ter) 12431
Sardenops, L. H., 9050, 12631

DOROSOMIDAE
Dorosoma, DIST., 3381

OSTEOGLOSSIDAE
Phareodus, DIST., MORPH., (E)
5161

MORMYRIDAE
Gnathonemus, MORPH., 13314,
15001
Marcusenius, MORPH., 15001
Mormyrus, DIST., TAX., 6963
Petrocephalus, MORPH., 13314

SALMONIDAE
EMB., 17039; L. H., 9054,
9056, 9057, 9058, 9059,
12624; MORPH., 9672
Oncorhynchus, L. H., 7237,
7241, 10811; MORPH., 6948
Salmo, DIST., 8816; L. H., 141,
158, 7238; MORPH., 5915,
6948
Salvelinus, L. H., 7238, 16279

COREGONIDAE
Coregonus, DIST., TAX., 3396;
L. H., 14423

THYMALLIDAE
Thymallus, L. H., 6953, 14414

OSMERIDAE
Osmaerus, MORPH., 14285

STOMIATIDAE
PHOTONECTOPS, 10619
TACTOSTOMA, 8806

STERNOPTYCHIDAE
Argyropelecus, TAX., 3389
Polyipnus, TAX., 3389

APODES

TAX., 18040

SYNAPHOBANCHIDAE
TAX., 12425

CONGRIDAE
Leptocephalus, MORPH., TAX.,
18040

NETTASTOMIDAE
FACCIOLELLA, 6974

ECHOLIDAE
HESPEROMYRUS, 16054

OPHICHTHYIDAE
Baeacanichthys, BIBL., MORPH.,
TAX., 5160
Callechelys, BIBL., MORPH., TAX.,
5160
Malvolophis, DIST., MORPH.,
6974
Myrichthys, BIBL., MORPH., 5160

SACCOPHARYNGIDAE
Saccopharynx, PHYL., 8805;
TAX., 18040

DISPARICHTHYIDAE
Disparichthys, TAX., 5159

INCERTAE SEDIS
(In Apodes)
Eupharynx, PHYL., 8805
Monognathus, MORPH., TAX.,
18040

HETEROGNATHI

CHARACINIDAE
PHYL., TAX., 3380
Aphyocharax, TAX., 5156
Apistogramma, DIST., MORPH.,
TAX., 6947

Astyanax, DIST., TAX., 1637
Brycon, DIST., TAX., 1637
Bryconamericus, DIST., TAX.,
1637
Gephyrocharax, DIST., TAX.,
1637
Hemigrammus, DIST., TAX., 8812
Hypsosbrycon, DIST., TAX.,
8812
Micralestes, TAX., 6965
Notropocharax, TAX., 5156

EVENTOGNATHI

Cyprinoidae, TAX., 1638

CATOSTOMIDAE
Catostomus, MORPH., 8819
Ictiobus, L. H., 9053

CYPRINIDAE
Apocope, DIST., L. H., 6962
Barbus, L. H., 12225
Brachydanio, EMB., 13326,
13327
Carassius, CYT., 12511, 13304
Culter, TAX., 3390
CULTRICHTHYS, 3390
CULTROPS, 3390
Cyprinus, HIST., 11425; MORPH.,
9675
Elonichthys, TAX., (Cb) 8813,
(Cb) 16053
Garra, MORPH., 6959
Hyborhynchus, L. H., 3395
Notropis, L. H., 18044
Pareoglossus, L. H., 18047
Varicorhinus, DIST., TAX., 6968

NEMATOGNATHII

ARIIDAE
Felicthys, TAX., 10627

BAGRIDAE
Pelteobagrus, L. H., 1595

CLARIIDAE
Allabenchelys, DIST., TAX., 8809
Clarias, DIST., MORPH., TAX.,
8809

MOCHOKIDAE
Atopochilus, DIST., TAX., 6968

CALLICHTHYIDAE
Corydoras, TAX., 12420

INIOMI

SYNODONTIDAE
Synodus, TAX., 12424

SCOPELARCHIDAE
NEOSCOPELARCHOIDES,
10619

MYCTOPHIDAE
TAX., 16049
DIOGENICHTHYS, 16049
Electroma, TAX., 16049
Lampnycetus, TAX., 16049
Myctophum, TAX., 16049

PLAGYODONTIDAE
Alepisaurus, DIST., 3377, 16050

HAPLOMI

ESOCIDAE
Esox, DIST., MORPH., 8818;
L. H., 12618

CYPRINODONTES

CYPRINODONTIDAE
Aphanius, L. H., 12210
Cynolebias, TAX., 8803
Cyprinodon, DIST., TAX., 8803;
L. H., 6962
Epiplatys, DIST., TAX., 8803;
EMB., 8049
Fundulus, EMB., 5949
Lebistes, EMB., 11445
Panchax, L. H., 12225
Rivulus, DIST., TAX., 1637

GOODEIDAE
Neotoca, L. H., 16052

POECILIIDAE
Xiphophorus, DIST., TAX., 8803

PHALLOSTETHIDAE
Gulaphallus, MORPH., 6972
Phenacostethus, MORPH., 6972

SYNENTOGNATHI

HEMIRAMPHIDAE
Oxyporhamphus, TAX., 3374

EXOCEIIDAE
TAX., 3374
Cypselurus, TAX., 3374
Parexocoetus, TAX., 3374
Froglichthys, DIST., 3388

ANACANTHINI

GAIDROPSARIDAE
Onos, L. H., 3581
GADIDAE
Melanogrammus, L. H., 5410

SELENICHTHYES

LAMPRIDAE
Lampris, DIST., 3377

HETEROSOMATA

TAX., 12419

PARALICHTHYIDAE
Paralichthys, HIST., 5884
Verecundum, TAX., 10626

HIPPOGLOSSIDAE
Drepanopsetta, L. H., 5405
Hippoglossus, L. H., 3533

PLEURONECTIDAE
Pleuronectes, L. H., 5405
Pseudopleuronectes, TAX., 3375

ACHIRIDAE
Achirus, MORPH., 3391
Trinectes, DIST., 3381

SOLEIDAE
MORPH., 3391
Buglossidium, MORPH., 3391
Microchirus, MORPH., 3391;
TAX., 8807
Monochirus, MORPH., 3391
Pegusa, MORPH., 3391
Quenselia, MORPH., 3391
Solea, MORPH., 3391

SYNAPTURIDAE
Synapturichthys, MORPH., 3391

THORACOSTEI

GASTEROSTEIDAE
Gasterosteus, CYT., 10724

SYNGNATHIDAE
TAX., 18048

AULOSTOMI

CENTRISCIDAE
TAX., 3383

MACRORHAMPHOSIDAE
Notopogon, TAX., 3383

LABYRINTHICI

ANABANTIDAE
Anabas, DIST., TAX., 6968

PERCOMORPHI

MELANOTAENIIDAE
Aidaprora, DIST., MORPH., 6974

ATHERINIDAE
Leuresthes, MORPH., 18042

MUGILIDAE
Mugil, DIST., 3381

SPHYRAENIDAE
Sphyraena, DIST., 3377, 3392

SCOMBRIDAE
Acanthocybium, MORPH., PHYL.,
6954

THUNNIDAE
Germo, DIST., 3377
Thunnus, DIST., 3376

TRICHIURIDAE
Trichiurus, HIST., 5884

ISTIOPHORIDAE
Makaira, MORPH., 6969

BRAMIDAE
Brama, DIST., 3377, 3392

STROMATEIDAE
Poronotus, DIST., 3384

CENTROLOPHIDAE
Icichthys, DIST., 3377

NOMEIDAE
CRIDORESA, 12428

ACROTIDAE
Acrotus, DIST., 3377

PISCES (Concluded) · AMPHIBIA · REPTILIA

CARANGIDAE

Alectis, DIST., 6970
Caranx, DIST., MORPH., 6966;
L. H., 6964, 6966; TAX.,
6963, 6964

PERCIDAE

Mioplosus, DIST., MORPH., (E)
5161
Perca, L. H., 3393

ETHEOSTOMIDAE

Boleosoma, DIST., MORPH., 8817
Hadropterus, DIST., 6957; L. H.,
8866
Poecilichthys, DIST., MORPH.,
8817

CENTRARCHIDAE

Eupomotis, L. H., 5408
Lepomis, L. H., MORPH., 6955
Micropterus, L. H., 9051, 14421;
MORPH., 18043

PRIACANTHIDAE

Pseudopriacanthus, DIST., 5157

ARRIPIDAE

TAX., 18048

SPARIDAE

TAX., 1639

DENTICIDAE

TAX., 1639

SCIAENIDAE

Leiostomus, HIST., 5884

CATAPHRACTI

SCORPAENIDAE

Scorpaena, MORPH., 18042
Scorpaenodes, DIST., TAX., 8815
Sebastes, DIST., 16019

PLATYCEPHALIDAE

Trudis, DIST., TAX., 6974

COTTIDAE

MORPH., TAX., 3385
Bunocottus, TAX., 3385
Cottus, HIST., 11428; MORPH.,
11376; TAX., 3385
Normanichthys, DIST., MORPH.,
TAX., 3385
Oligocottus, L. H., MORPH., 8804

LIPARIDAE

Liparis, MORPH., 5151

TRIGLIDAE

MORPH., 16962

CHROMIDES

POMACENTRIDAE

Dascyllus, DIST., TAX., 8815

PRISCACARIDAE

Cockereilles, DIST., MORPH.,
(E) 5161
Priscacara, DIST., MORPH., (E)
5161

CICHLIDAE

L. H., 5154
Cichlasoma, DIST., TAX., 6961
Leptolamprologus, TAX., 16055

MACRACARA, (Ter) 12481

Tilapia, TAX., 6965

PHARYNGOGNATHI

LABRIDAE

MORPH., 16962
Lepidaplois, DIST., TAX., 5155
LIENARDELLA, 5155
Teleogramma, TAX., 16055
Xiphocheilus, DIST., TAX., 5155
Xipochilus, DIST., TAX., 5155

GOBIOIDEA

ELEOTRIDAE

Asterropteryx, DIST., TAX., 8815
Gobiomorphus, DIST., TAX., 8815
LUZONLEOTRIS, 8810
Odontobutis, L. H., 1595

GOBIIDAE

TAX., 18048
Bollmannia, TAX., 10623
Enypnias, TAX., 10623
Garmannia, TAX., 10623
Gobiosoma, TAX., 10624
Gobulus, TAX., 10623
Lophogobius, TAX., 10623
Lythrypnus, TAX., 10623
Microgobius, TAX., 10623
Parrella, TAX., 10623
Risor, TAX., 10623

PERIOPHTHALMIDAE

Periophthalmus, MORPH., 5158

JUGULARES

BLENNIDAE

TAX., 18048
Hypsoblennius, TAX., 10625

BATRACHOIDIDAE

APHOS, 12421
Batrachus, TAX., 12421
Nautopaedium, TAX., 12421
Porichthys, TAX., 12421

XENOPTERYGII

GOBIESOCIDAE

Caularchus, DIST., MORPH., 5151

PLECTOGNATHI

CANTHIGASTERIDAE

Canthigaster, DIST., TAX., 8815

PEDICULATI

ANTENNARIIDAE

Antennaria, L. H., MORPH.,
16056

INCERTAE SEDIS

(In Pisces)

Aphielinidae, TAX., 18048
Canningius, DIST., (D) 3235
Heteromyrus, DIST., TAX., 8815
Lepidoplois, DIST., TAX., 5155

AMPHIBIA · REPTILIA

AMPHIBIA

(System of classification according
to Noble, "The Biology of
the Amphibia" (1931).)

CYT., 8919, 11453, 14349;
EMB., 758, 9768, 9778,
11450, 11453; HIST., 9691;
MORPH., 666, 4333, 4337,
5880, 7944, 8003; PHYL.,
5168

LABYRINTHODONTIA

Benthosuchus, MORPH., 16954

PHYLLOSPONDYLI

TAX., (Ob) 18051

BRANCHIOSAURIDAE

Branchiosaurus, TAX., (Ob)
18051

CAUDATA (URODELA)

MORPH., 4398; TAX., 12433

CRYPTOBRANCHIDAE

Cryptobranchus, EMB., 8035

AMBYSTOMIDAE

Ambystoma, CYT., 1720, 5298;
EMB., 4373, 4391, 5946,
8040, 11443, 11451, 11454,
18324, 18333, 17085,
17051; HIST., 658, 2472;
MORPH., 658, 679, 743,
744, 745, 749, 755, 2444,
4327, 4386, 7949, 7981,
9686, 11374, 11387

SALAMANDRIDAE

Salamandra, DIST., 12434
Triton, EMB., 5959, 15082,
17058; MORPH., 746, 748,
752, 2444, 10630
Triturus, CYT., 7114; EMB.,
4391, 8046, 13337, 15076,
16058; HIST., 657, 11415;
L. H., 16058; MORPH., 657,
754, 11375, 11426

PROTEIDAE

Necturus, MORPH., 9686, 9695

SALIENTIA (ANURA)

MORPH., 4392

DISCOGLOSSIDAE

Alytes, MORPH., 15014

Bombina, L. H., MORPH., 12432
Discoglossus, EMB., 5959, 13335

PIPIDAE

Xenopus, MORPH., 11379, 15014

PELOBATIDAE

Pelobates, MORPH., 15014

BUFONIDAE

Bufo, EMB., 8038, 17037; HIST.,
7986, 15022; L. H., 1595;
MORPH., 3396A, 7936,
7963, 15014
Syrrhopus, TAX., 5166
Telmatobius, DIST., TAX., 6980

BRACHYCEPHALIDAE

Dendrophryniscus, DIST.,
MORPH., 8820

HYLIDAE

Acris, CYT., 10722
Hyla, CYT., 10722; DIST., TAX.,
6978; EMB., 739, 8045,
13336; HIST., 5884;
MORPH., 758, 15014

RANIDAE

Rana, CYT., 58; DIST., 3397,
10631; EMB., 266, 736,
747, 4385, 9758, 9771,
11443, 13340, 15070;
HIST., 2472, 11397, 11412,
11419, 11420; MORPH.,
660, 742, 3398, 4351, 5896,
6977, 9685, 9686, 9705,
10631, 14997, 15014,
16982

POLYPEDATIDAE

Megalixalus, DIST., TAX., 6979
Rhacophorus, CYT., 1733; HIST.,
2479

REPTILIA

(Classification of fossils accord-
ing to Zittel, "Textbook of Pa-
laeontology," Vol. II (1932).)

DIST., (E) 5225; EMB.,
11444, 15067; HIST.,
11423; MORPH., 4333,
5879, 9676, 9690, 11423,
15011; TAX., 5879, 14289,
14290

THEROMORPHA

CYNOGNATHIDAE

Galesaurus, MORPH., 665

TESTUDINATA

PHYL., 16057

PELOMEDUSIDAE

Sternotherus, EMB., 733

EMYDIDAE

Chrysemys, DIST., 3402

TESTUDINIDAE

Clemmys, DIST., 3402, 12435
Malaclemys, EMB., 15074
Pseudemys, MORPH., 5963,
15012
Testudo, MORPH., 16958

CHELONIDAE

ARCHAEOCHELYS, 16057

SQUAMATA

SAURIA

GEKKONIDAE

Gymnodactylus, TAX., 6988

IGUANIDAE

Anolis, HIST., 5884; MORPH.,
690

Liolaemus, DIST., 6983, 6985,
8823, 10635; MORPH.,
8823; TAX., 5166, 6983,
6984, 6985, 10635, 16059

Phrynosoma, TAX., 18053

SCINCIDAE

Chalcides, DIST., TAX., 10637

TEIIDAE

Ameiva, MORPH., 15000

LACERTIDAE

Acanthodactylus, MORPH., 15000
Lacerta, DIST., 6976; EMB.,
9769; HIST., 713; TAX.,
6976, 6988

GERRHOSAURIDAE

Gerrhosaurus, TAX., 8822

AMPHISBAENIDAE

Rhineura, TAX., (†) 3404

HELODERMATIDAE

Glyptosaurus, TAX., (†) 3404

ANGUIDAE

Gerrhonotus, TAX., 3403

Ophisaurus, MORPH., 15000

INCERTAE SEDIS

(In Sauria)

Harpagosaurus, TAX., (†) 3404
PARAPRIONOSAURUS, (E)
3404

Xestops, TAX., (†) 3404

VIPERIDAE

Bitis, DIST., L. H., 10633

Vipera, TAX., 6986

THECODONTIA

ORNITHOSUCHIDAE

DIST., TAX., 10634

PARRINGTONIA, 10634

LORICATA

PHOLIDOSAURIDAE

Pholidosaurus, MORPH., 13287

GONIOPHOLIDAE

Goniopholis, MORPH., 13287

ALLIGATORIDAE

MORPH., 16983

Alligator, MORPH., 15012

SAURISCHIA

HALLOPODIDAE

Hallopus, DIST., TAX., (J) 5165

ORNITHISCHIA

TRACHODONTIDAE

MORPH., PHYL., 14291;
Lambeosaurinae, MORPH.,
14291

Prosaurolophus, MORPH., TAX.,
14291
Saurolophus, MORPH., TAX.,
14291

PROTOCERATOPSIDAE
Leptoceratops, DIST., MORPH.,
(†) (K) 18052

CERATOPSIDAE
Brachyceratops, DIST., (K)
18052

NANOSAURIDAE
Nanosaurus, DIST., (J) 5165

AVES

CYT., 7113; DIST., 5180, 5189, 5206, 7025, 10639, 10645, 14293, 16082, 16086, 16087; L. H., 1643, 7025, 10639, 10642, 10645; MORPH., 1643, 7028, 7029, 9676, 11381, 14298, 15004, 15011, 18080; TAX., 5200, 10639, 10645, 12439, 16089, 18080

(Arrangement of orders and families according to Wetmore, "A Systematic Classification for the Birds of the World, Revised and Amended" (1934).)

STRUTHIONIFORMES

STRUTHIONIDAE
Struthio, MORPH., 7931

RHEIFORMES

RHEIDAE
Rhea, MORPH., 7931, 11390

CASUARIIFORMES

CASUARIIDAE
Casuarii, MORPH., 7931

SPHENISCIFORMES

SPHENISCIDAE
Eudyptes, DIST., L. H., MORPH.,
10641; TAX., 7001

GAVIIFORMES

GAVIIDAE
Gavia, L. H., 9064

COLYMBIFORMES (PODICIPEDIFORMES)

COLYMBIDAE
(PODICIPEDIDAE)
L. H., 8844
Colymbus, DIST., 8844; L. H.,
8844, 9064
Podiceps, L. H., 5171

PROCELLARIIFORMES

Thalassidromidae, TAX.,
5182
DIOMEDEIDAE
Diomedea, DIST., 10646; L. H.,
9064, 10646; MORPH., 4369

PROCELLARIIDAE
Fulmarus, L. H., 18084
Pachyptila, MORPH., 5183
Petrodroma, DIST., 5188
Puffinus, DIST., 16090; EMB.,
4384; L. H., 9064

HYDROBATIDAE
Oceanodroma, DIST., 5188

PELECANIFORMES

PHAETHONTIDAE
Phaethon, DIST., 7007

PELECANIDAE
Pelecanus, MORPH., 5196

SULIDAE
Sula, L. H., 163; L. H., 168,
169; TAX., 1651

PHARACROCORACIDAE
Phalacrocorax, L. H., 5201

ANHINGIDAE
Anhinga, DIST., TAX., 7022

CICONIIFORMES

ARDEIDAE
Ardea, DIST., 5191, 14296,
14305; HIST., 4359; L. H.,
9064, 14305
Botaurus, L. H., 5179

THRESKIORNITHIDAE
Ajaja, L. H., 9064

ANSERIFORMES

L. H., 14301, 14302

ANTATIDAE
L. H., 8841, 8844
Anser, L. H., 9064
Arctonetta, DIST., 1644
Branta, DIST., 16088; L. H.,
9064
Cygnus, DIST., 16088; L. H.,
9064; MORPH., 705
Mareca, L. H., 9064
Mergus, DIST., L. H., 5205
Nettion, L. H., 9064
Nyroca, DIST., 9068
Philacte, L. H., 9064
Querquedula, L. H., 10815
Somateria, L. H., 8844

FALCONIFORMES

ACCIPITRIDAE
Accipiter, DIST., 14296, 14306;
TAX., 14306
Buteo, L. H., 9064, 14312
Circus, DIST., L. H., 14292
Haliaeetus, DIST., 8828; L. H.,
9064
Rostrhamus, L. H., 9064
Urubitinga, L. H., 9064

FALCONIDAE
Falco, DIST., 8853, 14296; L. H.,
9064
Herpetotheres, TAX., 1651

GALLIFORMES

DIST., L. H., TAX., 8851

MEGAPODIIDAE
Leipoa, L. H., 18071
Megapodius, TAX., 7014

CRACIDAE
Ortalis, L. H., 9064

TETRAONIDAE
Bonasa, L. H., 3539, 14435,
14436

Canachites, TAX., 16105
Centrocerus, L. H., 9067
Lagopus, DIST., TAX., 8851; L. H.,
8888, 14299
Falcipennis, TAX., 16105

PHASIANIDAE
Afropavo, TAX., 6941
Colinus, L. H., 5230, 9064, 9066
Coturnix, DIST., 5186

Gallus, CYT., 7111; EMB., 699,
738, 4377, 4380, 5945,
5954, 5958, 7984, 8036,
8050, 8052, 9759, 9760,
9762, 9770, 11442, 11443,
13323, 13331, 13332,
15072, 15073, 15080,
17047, 17048; HIST., 656,
5885; MORPH., 757, 759,
5914, 7984, 16974

Lophophorus, TAX., 16077

METALLOPHASIS, N.
SUBG., 16077

Lophortyx, L. H., 1878, 10818
Perdix, L. H., 164

Phasianus, L. H., 1879, 14436
Synoicus, DIST., 5186

GRUIFORMES

TURNICIDAE
Turnix, TAX., 7015

RALLIDAE
L. H., 8841
Amaurornis, DIST., MORPH.,
7022

Coturnicops, DIST., 18059
Megacrex, DIST., TAX., 7022
Rallus, TAX., 7015

OTIDIDAE
Heterotetrax, DIST., TAX., 7023

CHARADRIIFORMES

JACANIDAE
Jacana, TAX., 1651

CHARADRIIDAE
Anarhynchus, DIST., L. H., 5192
Charadrius, TAX., 7015
Chettusia, DIST., L. H., 16073
Squatarola, DIST., L. H., 16073
Thinornis, DIST., 18060
Vanellus, L. H., 9064

SCOLOPACIDAE
L. H., 8841
Actitis, L. H., 10644
Capella, L. H., 10644, 16073
Numenius, DIST., L. H., 16073
Phaeopus, L. H., 9064
Tringa, DIST., 16073

LARIDAE
Chlidonias, DIST., 14300
Larus, EMB., 4383
Sterna, DIST., 8850; EMB.,
4383; L. H., 5418, 8850,
14307; TAX., 7017

ALCIDAE
Aethia, L. H., 9064
Endomychura, DIST., TAX., 5176

COLUMBIFORMES

COLUMBIDAE
Columba, L. H., 9064
Ectopistes, L. H., 9064
Geopelia, DIST., TAX., 7022
Leptotila, L. H., 9064
Ptilinopus, DIST., TAX., 7022
Streptopelia, DIST., L. H., 8848

PSITTACIFORMES

PSITTACIDAE
Conuropsis, L. H., 9064
Purpureicephalus, DIST., MORPH.,
TAX., 5199
Rhynchopsitta, L. H., 9064

CUCULIFORMES

CUCULIDAE
Coccyzus, L. H., 9064
Cuculus, L. H., 9064

STRIGIFORMES

TYTONIDAE
Tyto, DIST., 14296

STRIGIDAE
Bubo, DIST., 8853
Cryptoglaux, L. H., 5198
Glauclidium, MORPH., 7035
Otus, DIST., 10651; TAX., 16051,
18061
Strix, DIST., 14296; L. H.,
3536; MORPH., 4328

CAPRIMULGIFORMES

CAPRIMULGIDAE
Nyctidromus, L. H., 9064

MICROPODIFORMES

MICROPODIDAE
Apus, DIST., 14296

TROCHILIDAE
Cyananthus, L. H., 9064
Eugenes, L. H., 9064
Hylocharis, L. H., 9064
Lampornis, L. H., 9064
Selaphorus, L. H., 5193

TROGONIFORMES

TROGONIDAE
Pharomachus, L. H., TAX.,
16063
Trogon, L. H., 9064

CORACIIFORMES

ALCEDINIDAE
Alcedo, DIST., 14296
Ceryle, MORPH., 9775
Halcyon, TAX., 7013
Megaceryle, L. H., 170, 10652
Sauromastus, DIST., TAX., 7022
Syma, DIST., TAX., 7022

PICIFORMES

CAPITONIDAE
Cyanops, DIST., TAX., 10638

PICIDAE
Campephilus, L. H., 9064, 12437
Ceophloeus, L. H., 12437
Dryobates, DIST., 7026, 8827;
L. H., 7026, 12437; TAX.,
8827
Sphyrapicus, L. H., 12437

PASSERIFORMES

TAX., 18065, 18073

TYRANNIDAE
Cnemotricus, DIST., TAX., 7036
Empidonax, L. H., 9064
Mitrepharus, DIST., 7036
Myiarchus, DIST., TAX., 7036;
L. H., 9064
Myiodynastes, L. H., 9064

MENURIDAE
Menura, L. H., TAX., 16084

ALAUDIDAE
Anacorys, DIST., TAX., 7023;
L. H., 5197
Calendulauda, DIST., TAX., 7023
Chersomanes, DIST., TAX., 7023
Pseudammodramus, DIST., TAX.,
7023

HIRUNDINIDAE
DIST., L. H., 8831
Hirundo, DIST., 5207, 8845,
14296; L. H., 18074; TAX.,
8845
Petrochelidon, TAX., 1649

DICRUROIDAE
Dicrurus, DIST., MORPH., 7022

CORVIDAE
Aphelocoma, TAX., 16100
Corvus, DIST., 14296
Garrulus, DIST., 14296
Pica, DIST., 8837, 14296; TAX.,
8837
Xanthoura, L. H., 9064

PARADISEIDAE
Ailuroedus, DIST., L. H., 5185
Cicinnurus, L. H., 7022
Manucodia, L. H., 7022

PARIDAE
Parus, DIST., 14296
Psittiparus, TAX., 1650

SITTIDAE
Sitta, L. H., 7021; TAX., 1642

TIMELIDAE
Aethocichla, DIST., TAX., 7023
Crateroscelus, DIST., 7022
ELOCINCLA, 10647
Napothera, DIST., TAX., 10638
Psophodes, L. H., MORPH., 14298

PYCNONOTIDAE
Iole, DIST., TAX., 10647

TROGLODYTIDAE
Trogodytes, DIST., 14296

AVES (Concluded) • MAMMALIA

MIMIDAE
Mimus, DIST., 5178
Toxostoma, L. H., 9064

TURDIDAE
DIST., 8831; L. H., 8831, 8841
Erithacus, DIST., 14296
Hylodichia, DIST., L. H., TAX., 8852
Karrucinda, DIST., TAX., 7023
Luscinia, DIST., 14296; L. H., 7008
Oenanthe, DIST., 14296; L. H., 9064
Oreocincla, L. H., 8827
Phoenicuroides, DIST., TAX., 7023
Phoenicurus, DIST., 14296
Saxicola, DIST., 14296
Sialia, L. H., 9064
Turdus, DIST., 8835, 14296; L. H., 8827, 8835, 8841

SYLVIIDAE
Acanthiza, DIST., PHYL., TAX., 5184

Apalis, TAX., 5197
Oisticola, L. H., 5170
Malurus, DIST., L. H., TAX., 10653
Megalur, DIST., 7022
Phylloscopus, DIST., TAX., 18081

REGULIDAE
Lophobasilus, DIST., TAX., 8845

MUSCICAPIDAE
Myiagra, DIST., MORPH., 7022
Petroica, TAX., 7013
Rhipidura, DIST., 7022

PRUNELLIDAE
Prunella, DIST., 14296

MOTACILLIDAE
DIST., L. H., 8831
Anthus, DIST., 7031, 14296; L. H., 7031
Motacilla, DIST., 14296

LANIIDAE
Pachycephala, TAX., 7013

PRIONOPIIDAE
Myiolestes, DIST., 7022

STURNIDAE
Sturnus, DIST., 14296

MELITHREPTIDAE
Meliphaga, DIST., 14294
Myzomela, DIST., L. H., 5169, 5187
Philemon, DIST., L. H., TAX., 10643

NECTARINIIDAE
Anthreptes, L. H., 5195
Arachnothera, DIST., TAX., 10647

VIREONIDAE
Vireo, TAX., 1642

COMPSOTHYLIPIDAE
Protonotaria, L. H., 7032
Vermivora, L. H., 1640

POLOCEIDAE
Euplectes, L. H., 165
Passer, CYT., 10723; DIST., TAX., 8845; L. H., 8839
Petrionia, DIST., TAX., 8845

ICTERIDAE
Agelaius, TAX., 1641

THRAUPIDAE
Piranga, TAX., 1652

FRINGILLIDAE
DIST., L. H., 8831
Aimophila, L. H., 9064
Carduelis, DIST., 14296
Chloris, DIST., 8846, 14296; L. H., 8846
Fringilla, DIST., 14296; L. H., 8841
Fringillaria, DIST., TAX., 7023
Leucosticte, DIST., 5207
Loxia, DIST., L. H., 8829
Melospiza, L. H., 8840
Passerculus, L. H., 9064; TAX., 16072
Pyrrhula, DIST., 14296
Serinus, DIST., TAX., 7023

INCERTAE SEDIS
(In Passeriformes)
Crithagra, DIST., TAX., 7023
Drymodia, DIST., TAX., 7023

MAMMALIA

DIST., 5212, (E) 5225, (+) 5241, 5242, 7050; EMB., 9764, 11878, 15079; HIST., 5890, 11421, 15040, 16986; L. H., 166, 5212, 5242, 7038; MORPH., 2435, 4311, 4312, 4326, 4333, (Ter) 5241, 5906, 7929, 7940, 7942, 9678, 11378, 13294, 13307, 15011, 15013, 15032, PHYL., 367, 5081, 5249; TAX., (E) 5225, 18091

(Arrangement of orders and families, in the main, according to Simpson, "A New Classification of Mammals" (1931). In the rodentia, families and genera are arranged according to Miller and Gidley, "Synopsis of the Suprageneric Groups of Rodentia" (1918).)

MONOTREMATA

TACHYGLOSSIDAE
Echidna, MORPH., 16973
Tachyglossus, MORPH., 7979
Zaglossus, MORPH., 7979

ORNITHORHYNCHIDAE
Ornithorhynchus, MORPH., 7979

MULTITUBERCULATA

TAENIOLABIDIDAE
Catopsalis, TAX., (E) 18094

MARSUPIALIA

DIDELPHIIDAE
Coona, DIST., TAX., (E) 7054
Didelphis, DIST., 5219, 14312; EMB., 5951, 15071; HIST., 4323; MORPH., 2425, 4323, 11407, 11408, 11409, 16969
Marmosa, MORPH., 2425
Dasypus, CYT., 1719

INSECTIVORA

SOLENODONTIDAE
Solenodon, MORPH., PHYL., 7051

CHRYSOCHLORIDAE
Chrysochloris, MORPH., 4360

LEPTICTIDAE
Metacodon, TAX., (E) 5216

SORICIDAE
Blarina, MORPH., 4344, 14312
Cryptotis, DIST., 5243; L. H., 5222, 5240
Microsorex, DIST., 5240; MORPH., 14312
Notiosorex, DIST., 7038
Sorex, DIST., 5222, 7038, 8855, 14312; MORPH., 4344; TAX., 8855, 12457, 18088

TALPIDAE
Parascalops, DIST., 5222; L. H., 12446
Scalopus, TAX., 18100
Talpa, MORPH., 4310

MACROSCOLIDAE
Nasillo, MORPH., 5238

PANTOLESTIDAE
Aphronorus, DIST., TAX., (E) 5225

CHIROPTERA
EMB., 13328; MORPH., 16108

PTEROPODIDAE
Cynopterus, L. H., 14308

PHYLLOSTOMATIDAE
STURNIOPS, 7041
Uroderma, L. H., 14308

CHILONYCTERIDAE
Chilonycteris, TAX., 12455

VESPERTILIONIDAE
Antrozous, DIST., 5222
Corynorhinus, DIST., 5222; L. H., 5219

Dasypus, L. H., 7038
Eptesicus, L. H., 5244
Euderma, DIST., 7038
Kerivoula, L. H., 14308
Lasius, DIST., 5222; L. H., 5222, 7038; TAX., 18105
Myotis, DIST., 5240, 12458; L. H., 5219, 5244, 12458
Nycticeius, DIST., 7038; TAX., 18105
Pipistrellus, DIST., 5222, 5230; L. H., 5222, 7038

MOLOSSIDAE
Tadarida, DIST., 5219, 5230, 18105; L. H., 7038, 14312

INCERTAE SEDIS
(In Chiroptera)
Aethalops, DIST., TAX., 5209
Tylonycteris, L. H., 14308

PRIMATES
MORPH., 676, 695, 4376, 8012, 11433, 15017

CEBIDAE
Cebus, MORPH., 677, 11402

CERCOPITHECIDAE
Macaca, L. H., 5232; MORPH., 678, 4309, 11401, 15018, 16970, 16975
Rhesus, HIST., 2438
Simia, MORPH., 8007

PONGIDAE
Pan, MORPH., 685, 686, 4384
Pongo, MORPH., 685, 686, 11402

HOMINIDAE
Homo, CYT., 57, 1727, 2449, 11413; EMB., 689, 730, 4317, 4382, 15064, 15066, 17086; HIST., 673, 691, 2428, 4339, 5892; MORPH., 663, 669, 674, 677, 680,

681, 682, 684, 687, 706, 707, 708, 709, 2443, 4313, 4330, 5892, 7933, 7938, 7956, 7976, 7985, 9683, 9689, 9706, 11393, 11394, 11399, 11402, 13292, 13293, 13296, 13297, 13300, 13301, 15015, 15033

TAENIODONTA
CONORYCTELLA, (E) 18094

EDENTATA

NEGATHERIIDAE
Nothotherium, L. H., 7048

MYRMECOPHAGIDAE
Myrmecophaga, EMB., 17045

DASYPODIDAE
Dasypus, TAX., 18099

LAGOMORPHA

OCHOTONIDAE
Ochotona, TAX., 12441

LEPORIDAE
DICEA, (N) 14311
Hypolagus, DIST., TAX., (N) 14311
Lepus, CYT., 2448; EMB., 737, 5957, 17052; HIST., 2426, 2427, 2430, 4319, 11417, 13305; L. H., 5240, 14435; MORPH., 676, 4315, 7961, 7971, 9684, 13298, 13306, 15008, 16106
PEDIOLAGUS, (N) 14311
PRATILEPUS, (N) 14311
Sylvilagus, DIST., 10655; L. H., 14312; TAX., 10655, 18100

RODENTIA
DIST., 7050, (N) 7057; HIST., 693; PHYL., (N) 7057; TAX., (N) 7056, (N) 7057; **SELEVINIIDAE**, N. FAM., 12442

SELEVINIIDAE
SELEVINIA, 12442

SCIURIDAE
EMB., 5280
Citellus, EMB., 4381; L. H., 7038, 12445; TAX., 10659
Cynomys, DIST., 5252
Eutamias, L. H., 14312
Marmota, DIST., L. H., 5258; MORPH., 16106
Sciurus, DIST., 5243; L. H., 10827; MORPH., 16106

Tamias, DIST., 14310; L. H., 7038, 10654
Tamiasciurus, DIST., 5243; L. H., 14312

GEOMYIDAE
L. H., 14309
Geomys, DIST., 3492, 10657; TAX., 5221, 10657
Heterogeomys, DIST., TAX., 10662
Pappogeomys, DIST., TAX., 7040
Platygeomys, DIST., TAX., 7039
Thomomys, TAX., 14309

HETEROMYIDAE
Dipodomys, MORPH., 4353; TAX., 18096
Helicomyus, MORPH., TAX., (E) 18108
Liomys, DIST., TAX., 7042
Perognathus, DIST., 1654, 5229, 10656; L. H., 18086; TAX., 5229, 10656, 14312, 18096, 18102, 18103

CASTORIDAE
Castor, DIST., 12443; L. H., 3534, 10819; MORPH., 16016; TAX., 10659

ORICETIDAE
Clethrionomys, DIST., 5243
Cricetus, TAX., 12453
Dicrostonyx, DIST., MORPH., 10667; TAX., 10667
Evotomys, CYT., 7121
Hodomys, TAX., 8864
Lemmus, L. H., 3202
Microtus, CYT., 7121; DIST., 5227, 5228, 5230; L. H., 3202; MORPH., 5240; TAX., 5227, 5228
Neotoma, DIST., 5219, 8857, 18105; L. H., 5236; TAX., 8857, 18096
Ondatra, DIST., 5243, 14312; L. H., 12634; MORPH., 14312

ONYCHOMYS, TAX., 18096
Peromyscus, CYT., 1717; DIST., 5219, 5243, 5254, 7042, 8860, 8861, 10664, 14312; L. H., 5215, 14312; MORPH., 8860, 8861, 10664; TAX., 5208, 7042, 7056, 10659, 18096, 18100, 18101

Pitymys, DIST., 5231, 18105; L. H., 5231
Reithrodontomys, L. H., 8866, 14312; TAX., 18096
Synaptomys, DIST., 5240, 5254, 14312

MURIDAE
EMB., 5950, 5957, 8048, 15061, 17038; HIST., 2439, 2440, 2441, 4352, 7965, 7967, 9696, 11383, 11384,

11398, 15021, 15023,
15025, 16989, 16990;
MORPH., 4329, 4351, 7974,
7975, 7981, 9692, 9693,
9694, 9697, 9698, 9699,
11388, 13302, 13308,
14998, 16966, 16980,
16995
Apodemus, CYT., 7121
Conilurus, DIST., TAX., 7055
Epimys, CYT., 2447
GONIODONTOMYS, (N) 7056
Leptomys, DIST., TAX., 7055
Mastomys, DIST., TAX., 10666
Mus, CYT., 7110, 7945, 16987;
EMB., 734, 8037, 8053,
15062; MORPH., 15019
Rattus, CYT., 55

ZAPODIDAE
Napaecozapus, DIST., 5222, 5230,
5248, 5251; L. H., 5251
Zapus, DIST., L. H. 5250

HYSTRICIDAE
Thecurus, TAX., 12456

ERETHIZONTIDAE
Erethizon, DIST., 5240, 12448

CAVIIDAE
Cavia, CYT., 1716; EMB., 2466,
8037, 8043, 8048, 17038;
HIST., 394, 5897, 7970,
11414; MORPH., 4321,
4325, 9697, 18299, 18308,
18312, 14996, 15006

CARNIVORA

MORPH., 13286

CREODONTA

OXYAENIDAE
SARKASTODON, (E) 7043

INCERTAE SEDIS
(In Creodonta)
Ellipsodon, TAX., (E) 18094

FISSIPEDIA

CANIDAE

CYT., 1715, 8453; HIST.,
4353
Canis, DIST., 5223, 18085; EMB.,
4379; HIST., 2450, 7989,
7968, 11385, 15024; L. H.,
5223, 10826, 14426;
MORPH., 671, 676, 2486,
4314, 4341, 5894, 7952,
11400, 13295, 13298,
15008, 16995; TAX., 18085
Vulpes, DIST., 5223; L. H., 5223,
10822; TAX., 5213
Urocyon, DIST., TAX., 7042,
10661; L. H., 5240, 10822,
14312

PROCYONIDAE

Potos, DIST., TAX., 7042
Procyon, MORPH., 4354

URSIDAE

Ailuropus, DIST., L. H., 5228
Ailurus, DIST., L. H., 5228
Selenarctos, DIST., L. H., 5228
Thalarcos, DIST., 14312
Ursus, DIST., 5219, 5223; L. H.,
5223; TAX., 5218

MUSTELIDAE

Enhydra, DIST., L. H., 5224
Mephitis, DIST., 14312; L. H.,
5240, 14312, 14424
Mustela, CYT., 59; DIST., 5243;
EMB., 732; L. H., 5222,
5230, 14312
Spilogale, DIST., TAX., 8856
Taxidea, TAX., 18095

FELIDAE

Felis, DIST., 5219; EMB., 15061;
HIST., 15028; MORPH., 876,
710, 2436, 7953, 7960,
9687, 9689, 11391, 11392,
18295, 14999, 15020,
16976, 16979, 16993
Lynx, L. H., 10821

PINNIPEDIA

OTARIIDAE
Zalophus, DIST., 18093

PHOCIDAE

Halichoerus, DIST., L. H., 5247
Lobodon, DIST., L. H., MORPH.,
7049
Phoca, DIST., 5247

CETACEA

MORPH., 675, 4338; PHYL.,
TAX., 5235

ZIPHIIDAE

Mesoplodon, L. H., 14312

DELPHINIDAE

Pseudorca, MORPH., 8859

PHYSETERIDAE

Physeter, L. H., 1658

BALAENOPTERIDAE

Balaenoptera, L. H., TAX., 1660;
MORPH., TAX., 12444
Megaptera, L. H., TAX., 1657

BALAENIDAE

Eubalaena, L. H., MORPH., 1659

INCERTAE SEDIS

(In Cetacea)
PLATYOSPHYS, 5235

CONDYLARTHRA

DRACOCCLAENUS, (E) 18094
JEPSENIA, (E) 18094

TUBULIDENTATA

ORYCTEROPODIDAE
Orycteropus, MORPH., 5238

AMBLYPODA

PERIPTYCHIDAE

Anisonchus, TAX., (E) 18094
Haploconus, TAX., (E) 18094
Periptychus, DIST., TAX., (E)
5225

PROBOSCIDEA

MASTODONTIDAE

Mammut, DIST., 12443
Mastodon, DIST., 12450

ELEPHANTIDAE

Elephas, DIST., TAX., (†) 5210
MORPH., 4322, (†) 5210,
5947, 5948, 15026

HYRACOIDEA

PROCAVIIDAE

Hyrax, MORPH., 704

PERISSODACTYLA

EQUIDAE

MORPH., (N) 7047, 11377
Equus, DIST., 5223, 12443; L. H.,
5223; MORPH., 700, 11395,
11490; PHYL., 11490
Meshippus, PHYL., 5081
Nannipus, MORPH., (N) 7047
Plihippus, DIST., MORPH., (N)
10669

TAPIRIDAE

Tapirus, DIST., 12443

RHINOCEROTIDAE

COOPERIA, (E) 7058
Diaceratherium, DIST., MORPH.,
TAX., (†) 5246
Diceros, MORPH., TAX., 10663

ARTIODACTYLA

TAXASSUIDAE

Mylohyus, DIST., 12443
Prosthennops, DIST., MORPH.,
TAX., (N) 5217

SUIDAE

Sus, CYT., 16161; EMB., 8037,
9763, 18063; HIST., 16996;
MORPH., 7953, 7981, 16996;
TAX., 12448

CAMELIDAE

Procamelus, TAX., (N) 18097

CERVIDAE

Alces, DIST., MORPH., TAX.,
10660
Capreolus, DIST., L. H., 5223
Cervus, DIST., 5223; HIST.,
5881, 5886, L. H., 5335,
5223
Elaphodus, DIST., L. H., 5223
Hydropotes, L. H., 1604
Moschus, DIST., L. H., 5223
Muntiacus, DIST., L. H., 5223
Odocoileus, DIST., 5219; L. H.,
10820; MORPH., 16984
Rucervus, MORPH., 16985
Rusa, DIST., L. H., 5223

GIRAFFIDAE

Bohlinella, TAX., 7038
Bramatherium, MORPH., TAX.,
(†) 10665
Deperetia, TAX., 7038
Sivatherium, TAX., 10665

ANTILOCAPRIDAE

PHYL., TAX., 8867
Capromeryx, TAX., 8867
Plioceros, TAX., 8867
Proantilocapra, TAX., 8867

BOVIDAE

MORPH., 13286
Bos, DIST., L. H., 5223; MORPH.,
711, 4314, 5887, 11394,
11410
Bubalis, MORPH., 13285
Budorcas, DIST., L. H., 5223
Capra, CYT., 54
Capricornis, DIST., L. H., 5223
Gazella, DIST., L. H., 5223
Nemorhaedus, DIST., L. H., 5223
Ovis, CYT., 54; DIST., 5223;
L. H., 5220, 5223; MORPH.,
2433
Pantholops, DIST., L. H., 5223
Poëphagus, CYT., 8920, 16165
Pseudois, DIST., L. H., 5223
Rhynchitragus, MORPH., 13285
Sphenopalos, TAX., 8867
Sylvicapra, MORPH., 13285

INCERTAE SEDIS

(In Mammalia)
Plianchenia, TAX., (N) 18097

GEOGRAPHICAL INDEX

(For introductory guide see page 1813)

NORTH AMERICA

North America (general):

Eocene conditions affecting extinction of mammals	5081
future probable dist. of Japanese beetle	15901
land mammals of, book	5249
life zones	5386
Neogenic peccaries	5217
Pliocene rodents from, annotated lists	7057
seeds	(Ob)15431
succession and range of Cambrian faunas	5083
Tertiary floras	2781
vegetation	10751
Aves	9064, 9065, 12439, 13065
Bryophyta	4748
Fungi	13737
Hymenoptera	12209
Mammalia	5249
Mollusca	10562
Pteridophyta	11847
Spermatophyta	2841, 4769
Tricoptera	12407
western: Aves	5176
Mammalia	(N)7057
Spermatophyta	3863, 6377, 11862, 17523

ALASKA (including ALEUTIAN ISLANDS):

botanical expedition in	3422
flora of Little Diomed Is.	13776
forest trees	3019
as path of human and canine migration into N. America	18085
parasites of birds and mammals	1564
vegetation	7191
Aves	7002
Coleoptera	8767
Echinodermata	14224
Lichenes	6363, 8410
Mammalia of Aleutian Is.	5212
Odonata	12403
Pisces	3392, 5151
Spermatophyta	13760

GREENLAND:

bottom fauna of fjords	3491
fauna	3235, 5082
flora	3235
phytogeography	117
plankton	3519, 7221
spp. represented in bird pellets in caves	10667
vit. O deficiency, study	14937
zoogeography	1828
Annelida	1606, 6316, 6617
Aves	10667
Collembola	5146
Diptera	6889
Pisces	3382
Protozoa	14200
Spermatophyta	10162

LABRADOR: Mammalia	5284, 5855
NEWFOUNDLAND: correlation of Cambrian faunas	5083

CANADA

Canada (general):

diet survey in Toronto	10954
extension of Sonoran faunistic zone into	5252
fauna	12612
insect pests of, 1937	10387
soil erosion and conservation	5370
vegetation	3392
Crustacea	16032
Hymenoptera	10603
Lichenes	3411
Insecta	1487
Lepidoptera	3356
Mammalia	5252
Platyhelminthes	1590, 8782
Protozoa	17905

ALBERTA:

Spermatophyta	2845
---------------	------

BRITISH COLUMBIA:

forest trees	3019
limnology	5400
plankton	138, 139
Aves	5424
Coleoptera	10591
Diptera	12367
Ephemera	12410
Fungi	6351, 8402
Hymenoptera	18015
Lepidoptera	8787
Mammalia	5218, (E)5235, 5240
Mollusca	1612
Pisces	3377
Reptilia	3402
Spermatophyta	4797, 4797B

MANITOBA:

soil and vegetation zones	10109
Fungi	10109, 15448
Mammalia	5230

NEW BRUNSWICK:

climate, geography, biota	10645
correlation of Cambrian faunas	5083
forests and forestry	13947
Aves	10645
Hymenoptera	14123
Lepidoptera	10424

NORTHWEST TERRITORIES:

Bryophyta	15480
-----------	-------

NOVA SCOTIA:

correlation of Cambrian faunas	5083
Mammalia	12457
Pisces	10314
Platyhelminthes	10552
Spermatophyta	6795
Ontario:	4800

ONTARIO:

parasites of rose aphid in, 1936-37	10451
Aves	18059
Diptera	14256
Ephemera	12410
Fungi	15451, 15454
Hymenoptera	1489
Hymenoptera	10423
Mammalia	4796
Spermatophyta	4796

QUEBEC:

insect damage to forests	12207
Crustacea	12331
Diptera	12375
Hymenoptera	10423, 14123
Mammalia	4747
Myxomycetes	5240, 14312
Pisces	11834
Saskatchewan:	8817

SASKATCHEWAN:

soil and vegetation zones	10109
grasshopper outbreaks	1496
Fungi	10109
Hymenoptera	3346
Hymenoptera	6920
Spermatophyta	(E)10096

GREAT LAKES

Pisces	10620
--------	-------

UNITED STATES

United States (general):

conservation program	16288
erosion-control and wildlife values of woody plants	4760
book	4289
exophthalmic goiter, incidence	4289
soil erosion and conservation	5370
trichinosis	14195
vegetation	5369
of Columbia River Gorge	9021
of Southern Great Plains	10791
zoogeography, extent of Upper Sonoran zone	5252

Acarina	8278
Diptera	8999
Fungi	15451
Hymenoptera	1629
Insecta	1487
Lepidoptera	3356
Lichenes	8411
Mammalia	(E)5235
Reptilia	14289, 16060
Spermatophyta	6390, 17531
eastern: Rotatoria	6807
Fungi	11827
southern: Gulf of Mexico fishes migrating into streams	3381
vegetation	7195
southeastern, Leucoctozoon in turkeys	12273
southwestern: ecology of desert reptiles	18053
western, seleniferous areas and formations	10179
Tertiary flora	2781
Mammalia	14310
Pisces	16049
Siphonaptera	18036
Spermatophyta	4797A, 17516, 17517

ALABAMA:

soil survey	8488
vegetation	12595
weeds of	4843
Aves	18079
Echinodermata	10552
Mammalia	18105
Mollusca	8744
Protozoa (E)	10529

ARIZONA:

dung of ground sloth in caves of	7048
fossil plants in dung of ground sloth	7048
ground water	7175
Angiospermae	1137
Bryophyta	4750
Coleoptera	14245
Diptera	14256
Hemiptera	10407
Hymenoptera	1651, 3345, 10604, 18021
Hymenoptera	12230, 18023
Lepidoptera	10614
Mammalia	5219, 5227, 5228, 8860
Reptilia	3403
Spermatophyta	6422, 17535

ARKANSAS:

mosquitoes of rice field	12227
pine-growing soils	1309
vegetation	10752
Echinodermata	(Cb)10555
Hymenoptera	12230
Spermatophyta	(E)17477

CALIFORNIA:

biota of dunes	3487
botany in, historv	3420
flora of San Diego	7211
forest trees	3019
fossil plants	(N)17475
orange tortrix on citrus	8634
plankton	14397
plant diseases	3121, 4967, 4980, 4981, 10343, 12125, 17748, 17793
soil survey	17606
Tertiary mammalian faunas	5084
trichinellosis	6736
vegetation	7199, 7200, 12598
woody ornamentals for	1266
Annelida	1607, 1608
Aves	3538, 5178, 5207, 6990, 8836, 16088
Coleoptera	5131, 6868, 6870, 6886, 6887, 8651, 12342, 17994, 17997, 17999
Crustacea	17969
Diptera	12359, 14138
Fungi	1482, 2302, 6351, 11827, 17489
Hymenoptera	3348, 6915, 8786, 18018, 18021
Hymenoptera	1633, 6923, 10448, 10608, 10610, 14264
Lepidoptera	3172, 5142, 5143

GEOGRAPHICAL INDEX

Mammalia	1654, 3495, 5222, 5224, 7038, 7046, 7056, 7057, 8860, 12458, 14312, 14426, 18098, 18101, 18105
Mollusca	(E)10558, 12315
Myriopoda	6829, 8798
Pisces	5162, 6952, 6962, 8806, 10624, 16054
Platyhelminthes	12253
Protozoa	(N)14199
Reptilia	3408
Spermatophyta	2824, 2848, 2854, 2876, 2898, 4768, 4770, 4781, 4786, 4792, 4802, 6384, 6394, 6399, 6400, 6401, 6410, 6411, 6412, 6421, 10130, 10136, 11854, 15512, (N)17479, 17517, 17532, 17535, 17538, 17542
Thysanoptera	10446
COLORADO:	
fossils of, University museum	1538
new dog, of Miocene	12460
plant diseases	3116
type fossils from	1538
type specimens of fossil animals and plants	1538
vegetation	126, 133
Aves	1652
Bryophyta	1094
Coleoptera	12355
Diptera	1622, 12369, 14256
Fungi	1080
Homoptera	1631
Insecta	(N)3373
Lepidoptera	10402
Mammalia	5229, 5230, (M)12460, 18107
Mollusca	(Ob)14231
Spermatophyta	13760, 17540
CONNECTICUT:	
European red mite in, control	15896
insect pests in (1936)	8641
limnology	3524
plant diseases	3164
Aves	14436
Crustacea	3308
Fungi	2807
Pisces	18045
Rotatoria	6805
DISTRICT OF COLUMBIA. (See Maryland.)	
FLORIDA:	
agriculture in	2929
fish parasites	15948
hookworm	5093
helminth epidemiology	6742
insect pests of pecan	3175
intestinal protozoa	14162
mineral deficiencies in soil	14071
Arachnida	3319
Aves	8836
Crustacea	12329, 17978
Diptera	12213, 14140
Echinodermata	10552
Fungi	4737, 6353, 8403
Homoptera	3346, 10604
Mammalia	18100
Nemathelminthes	17959
Pisces	10628, 18050
Platyhelminthes	17939
Pteridophyta	1098
GEORGIA:	
soil survey in	13856
Aves	5168, 5190
Bryophyta	8418
Diptera	12361
Fungi	11813
Platyhelminthes	6788
Protozoa	3270
Pteridophyta	17507
IDAHO:	
boron deficiency in soils	12056
forest trees	3019
insects on Douglas fir	10427
vegetation	5385, 9016
Acarina	3314, 6853
Coleoptera	10591
Fungi	15464
Homoptera	3346, 10604
Hymenoptera	6922, 12385
Mammalia	5218, 10659, 12445
Spermatophyta	4773, (N)17480
ILLINOIS:	
Carboniferous flora	4726
effect of crop rotation on root insects, maize	17865
fossil leaves and stems, coal measures	15429
Mississippian ostracods	8680
plankton	1851
trichinosis	6737
Homoptera	3346, 10604
Insecta	(Ob)3372
Protozoa	3265
Reptilia	3405

INDIANA:	
afforestation	13964
Conservation Clubs	16278
fossil algae	4727
intestinal parasites	14176
microclimate of ridge in Monroe County	3511
rainfall	8990
vegetation	1839, 1843, 1844, 12592
Angiospermae	1647
Aves	14260
Homoptera	(P)12450
Mammalia	11833
Myxomycetes	6938
Neuropteroids	18041
Pisces	6789
Platyhelminthes	1593, 5106, 6789
Porifera	10770
Reptilia	12438, 12435
IOWA:	
grasshopper outbreaks	1493
soil survey	15577, 17615
vegetation	3500
Aves	8849, 16099, 18078
Bryophyta	2902
Coleoptera	16029
Crustacea	(O)8759
Diptera	14256
Mammalia	5226, 18105
Protozoa	12283
Pteridophyta	1096, 2902
Spermatophyta	2902
KANSAS:	
entomology in, history	14
horse strongylosis	10512
insect population studies	1487
Japanese beetle	16025
small fruit insects	10396
soil survey	2976
vegetation	115
Angiospermae	1149, 1150
Diptera	1523, 14256, 18002
Hemiptera	1488
Homoptera	13038, 13039, 16037
Hymenoptera	1523
Mammalia	114, 5222, 7038
Myxomycetes	1084
Spermatophyta	17537
KENTUCKY:	
Algae	4730, 11807
Diptera	18002
Lichenes	4744
Mammalia	5254
Nematoda	14217
Pisces	3394
Platyhelminthes	5106
Pteridophyta	1103
LOUISIANA:	
fauna	5377
forest resources	3037
mosquito control	6701
plant diseases	17775
vegetation	5368, 12588
Aves	1646, 7020
Coleoptera	10590
Diptera	12376, 14256
Hemiptera	6909, 6912
Homoptera	6914
Hymenoptera	12230
Platyhelminthes	6782, 6783, 6784, 6801
Spermatophyta	6439
Thysanoptera	6944
MAINE:	
Gulf of, Limacina in	5392
Coleoptera	12344
Crustacea	3308
Hymenoptera	12209, 18032
Insecta	5128
Lichenes	4746, 4747
Mammalia	3540, 7037, 7038
Pisces	5157
Rotatoria	6805
MARYLAND and DISTRICT OF COLUMBIA:	
cooperative Jap. beetle work in	12208
pinworm (<i>Enterobius</i>) incidence	5089
salt marsh flora and mosquitoes	12214
vegetation	16252
Annelida	6816
Fungi	6356
Pisces	(N)10627
MASSACHUSETTS:	
filariasis	1539, 12262
shade tree insects	14124
vegetation	14427
Crustacea	3308
Fungi	4738
Mammalia	5208, 5219
Pisces	3388, 6970
Platyhelminthes	5110, 10544, 15986, 17946

MICHIGAN:	
beaver colonies	3534
fauna of aquatic plants	107
frost-hardy trees and shrubs for	1286
limnology	3526
plankton	1856, 5395
plant diseases	1426
soil survey	11971
streams, glacial history	104
Trematode parasites of ducks	1591
vegetation	119
Acarina	3314
Algae	6333
Arachnida	10585
Aves	5417
Bryozoa	(D)12311
Coelenterata	(D)10535
Crustacea	12322
Diptera	10800, 12375, 14256
Fungi	4739, 13737
Hymenoptera	10611
Mammalia	7038, 14424
Mollusca	8743, 8993
Pisces	3393
Platyhelminthes	1591, 6793, 12301, 14205, 14207, 17939
Pteridophyta	1107
Spermatophyta	10160, 10161
MINNESOTA:	
conservation project	3542
fossil plants	(K)17476
rodents, parasites of	5222
shelterbelt success in	17650
Algae	1071
Coleoptera	16028
Diptera	5057
Fungi	4740
Mammalia	18105
Rodentia	3496
MISSISSIPPI:	
Bryophyta	8418
Hymenoptera	12230
Mollusca	(K)5121
MISSOURI:	
fossil flora	13718
fur bearing animals	160
Japanese beetle control	1485, 16025
woodchucks, ecology	5253
Brachiopoda	(i)3292
Bryophyta	15476
Coleoptera	1485
Diptera	14256, 18002
Mammalia	5219, 5253, 18105
Mollusca	(Ob)8741
Spermatophyta	6381, 6436, 10156
MONTANA:	
Acarina	6858
Brachiopoda	(Cm)6818
Mammalia	5240
Pisces	6953
Reptilia	(K)18052
Spermatophyta	(E)17477
NEBRASKA:	
soil survey	4857, 8484, 15573
vegetation	120, 9019, 9038, 17083, 12601, 12602
Diptera	18002
Lepidoptera	8793, 12395
Mammalia	10657, (E)18108
Protozoa	3257
NEVADA:	
Algae	(O)2784
Aves	5207
Coleoptera	6866
Homoptera	1631
Pisces	(i)5162
Spermatophyta	13751
NEW HAMPSHIRE:	
soil survey	17618
Crustacea	3308
Mammalia	5240
Pteridophyta	6430
Spermatophyta	6430
NEW JERSEY:	
dysentery amoeba incidence	8682
Coelenterata	8726
Coleoptera	12353
Hymenoptera	14128, 14136
Lichenes	6366
Pteridophyta	4754
Rotatoria	6805, 6807
NEW MEXICO:	
anopheles in	15913
malaria in	15913
Aves	8836
Coleoptera	10590
Homoptera	8645
Lichenes	8413
Mammalia	8857, 8860
Mollusca	(Cb)14231
Reptilia	3403
Spermatophyta	4795, 17535
NEW YORK:	
Adirondack forests, deer browsing effects in	1390

GEOGRAPHICAL INDEX

- apple pests, 3173
ectoparasites of Pitymys, 5231
fossil plants, (D)13716
herbarium of Geo. W. Clinton, 1083
soil survey, 1223, 15533
vegetation, 7205
Algae, (Pl) 8371
Diptera, 1624, 6895, 12194, 14256
Gastrotricha, 6804
Hymenoptera, 14128
Mammalia, 5219, 5231, 14312
Platyhelminthes, 6794
Porifera, (Cb, D) 6775
Pteridophyta, (D) 2785
Thysanoptera, 8796
- NORTH CAROLINA:**
soil survey, 2972
vegetation, 12594
zoology, bibliography of, 14334
Acarina, 17981, 17982
Algae, 15433
Bryophyta, 8418, 11835
Fungi, 15443, 15456, 15463, 15470, 17484, 17491
Lichenes, 15474
Pisces, 16050
Platyhelminthes, 12293, 15989
Pteridophyta, 17506
- NORTH DAKOTA:**
vegetation, 7197, 12604
Diptera, 14256
- OHIO:**
phytogeography, 12599
plankton, 136
soil survey, 2971, 15578
trichinosis, 1551
vegetation, 5381
wheat field insect survey, in 1938, 3185
Algae, 2792
Diptera, 14256
Homoptera, 3346
Mammalia, 5240
Mollusca, (†) 3305
Odonata, 3380
- OKLAHOMA:**
biota, 1822
plant diseases, 14100
soil survey, 11965, 17610, 17611
vegetation, 3506
Acarina, 17981
Brachiopoda, (†) 3292
Crustacea, (O) 8756
Echinodermata, (Cb) 10555
Ephemera, 12410
Fungi, 10457
Homoptera, 1630
Hymenoptera, 14264
Mammalia, 111
Nematelminthes, 17954
Nematoda, 14213
Platyhelminthes, 1600, 10541, 17947
Spermatophyta, 17537
- OREGON:**
fauna and flora, 16132
forest trees, 3019
insect pests of strawberry, 15895
lichens of, 4745
plant diseases, 12125, 14046, 14095
vegetation, 9021
Acarina, 8853
Aves, 12307
Crustacea, 12322
Diptera, 12359
Fungi, 6356, 11827, 15464
Homoptera, 1631
Hymenoptera, 3350
Lepidoptera, 14109
Mammalia, 5218, 5222, (N) 7056, 7057
Myriopoda, 5123
Platyhelminthes, 17938
Reptilia, 3403
Siphonaptera, 18035
Spermatophyta, 8398, 6403, (N) 10099, (N) 17478, 17517, 17528
Thysanoptera, 8799
- PENNSYLVANIA:**
dysentery amoeba incidence, 8632
endemic P. deficiency in cattle, 15090
fossil plants, (D) 13716
geography, 5272
Martinsburg shale, fossils in, (O) 3236
soil survey, 1217, 11960
Amphibia, (Ob) 18051
Aves, 5191, 6996, 18097
Echinodermata, (D) 10556
Hymenoptera, 14128
Mammalia, 5222
Myxomycetes, 11834
Porifera, (Ob, D) 6775
Protozoa, 1580
Pteridophyta, 11848
Spermatophyta, (Ob) 10095
- RHODE ISLAND:**
soil survey, 11970
Crustacea, 3308
- SOUTH CAROLINA:**
soil survey, 1219
Amphibia, 8821
Aves, 5190
Hymenoptera, 12230
Pteridophyta, 17509
- SOUTH DAKOTA:**
grasshopper outbreaks, 1498
vegetation, 3508
Homoptera, 3346
Mammalia, (N) 18097
- TENNESSEE:**
medusae, 8276
plankton, 5396
vegetation, 5372, 10781
zoology of, bibliography, 12495
Amphibia, 6975, 14238
Aves, 7005, 7027
Bryophyta, 15479
Crustacea, 5125, 10570, 12322
Fungi, 15456, 15463, 17491
Hymenoptera, 6922
Insecta, 5127
Mammalia, (Pl) 12443
Pisces, 6949, 6950, 6960, 6967
Platyhelminthes, 6788
Reptilia, 6975, 14238
Spermatophyta, 4801, (E) 17477
- TEXAS:**
forest resources, 15632
muscoid flies, 5058
plant diseases, 3169, 15813
soil survey, 2974, 10210
Acarina, 6854
Aves, 1642
Brachiopoda, (Cb) 3291
Coleoptera, 10590
Diptera, 14256
Echinodermata, (Ob) 10555
Homoptera, 3345, 8645, 10604
Hymenoptera, 12230
Mammalia, 3492, 5219, 5221, 5236, 10655, 10656, (N) 10669
Mollusca, (Ob) 14231
Myriopoda, 5123
Pisces, (Pr) 10621
Spermatophyta, 2885, 4785, 13748, 17536, 17537
- UTAH:**
fruit-tree survey, 3012
mammals, of Eugene, 5225
seleniferous areas, 10179
soil survey, 6504
Aves, 1641
Coleoptera, 10411, 10433
Homoptera, 10604
Hymenoptera, 14264
Mammalia, 5219, 5230, 10664, (E) 18094, 18096, 18104
Plecoptera, 12405
Spermatophyta, 2844, 13755, 13760
Tricoptera, 12405
- VERMONT:**
Mammalia, 5219, 5222, 5230, 5242, 5250, 5251
- VIRGINIA:**
botany in, history, 8886
Fungi, 15444, 15446
Homoptera, 1628
Lepidoptera, 12391
Mammalia, 5222, 5243, 7038
Neuroptera, 12410
Pisces, 6957
Platyhelminthes, 6792, 6799, 8730
Pteridophyta, 11849
Spermatophyta, 2903, (Ob) 10095, 11901, 11902, 11903, 11904, 11905, 11907, 11908, 11909, 11910, 13763, 13771
Thallophyta, 13739
- WASHINGTON:**
erosion control, crop rotations, 10199
forest trees, 3019
insects and arachnids of, biblio. and list, 12170
littoral fauna, 8872
plankton, 3525
plant diseases, 17749
soil survey, 6503
vegetation, 7193, 9021
Acarina, 6853
Angiospermae, 1158
Arthropoda, 6766
Aves, 5207
Coleoptera, 8768, 12346
Crustacea, 12322
Fungi, 15464
Gymnospermae, 1158
Homoptera, 10604
Mammalia, 5218
- Orthopteroidea, 14272
Pisces, 3376
Platyhelminthes, 10541
Protozoa, 6766
Pteridophyta, 3442
Reptilia, 3403
Siphonaptera, 18035
Spermatophyta, 2397, 4798, 6393, 8442
- WEST VIRGINIA:**
Aves, 6991
Homoptera, 1628
Pisces, 6957
Pteridophyta, 3420
- WISCONSIN:**
disease of beets, possible soil-deficiency factor in, 14077
fauna, 3498
fish parasite relations, 8687
mineral content of lake waters, 7225
vegetation, 12589
Aves, 5420
Homoptera, 3346
Lepidoptera, 8789
Mammalia, 5222, 5230, 5418, 12634
Mollusca, (O) 10561
Pisces, 8816, 8818, 8819
Platyhelminthes, 10541, 12291
Protozoa, 6771
Spermatophyta, 10131
- WYOMING:**
fossil flora, 13715
insects and birds of, Yellowstone, 13
pasture and browse plants, P content, 15096
seleniferous areas, 10179
soil survey, 10211, 15576
Acarina, 6853
Homoptera, 3346
Hymenoptera, 3350, 14264
Lepidoptera, 8790
Mallophaga, 18038
Mammalia, 5220
Pisces, (E) 5161
Platyhelminthes, 6800
Reptilia, (E) 3404

MEXICO

- botanical expedition in, 3422
conifers of, 1284
cotton-growing regions of, 4824
economic plants of, 10294
entomological laboratory, 3421
forests, 15679
medical helminthology, 1563, 14192
pine forests, 10259, 15661
plant diseases, 3169
soils, 1220
vegetation, 12593, 16266
Acarina, 6854
Aves, 1649, 1651, 10661, 14306
Coleoptera, 8763
Crustacea, 6844, 17969
Diptera, 14251
Hemiptera, 8763, 16035
Hymenoptera, 8763
Lepidoptera, 6932, 8792
Lichenes, 8411
Mammalia, 5225, 7039, 7040, 8855, 10661, 10662, 18093, 18095, 18102, 18103
Neuropteroidea, 12402
Pisces, 5160, 6952, 8803, 10623, 16049
Platyhelminthes, 10541
Protozoa, (Ter, K.) 14196
Reptilia, 3403
Spermatophyta, 2830, 2840, 2841, 2885, 4778, 4785, 6422, 11886, 11900, 12415, 13751, 13758, 17521, 17526

CENTRAL AMERICA

- Central America (general):
geology of, bibliography and index, 5278
Aves, 18065
Mammalia, 5249
Spermatophyta, 2881, 4769
- BRITISH HONDURAS:**
forestry, annual administrative report (1937), 3022
Lichenes, 10117
- COSTA RICA:**
Coleoptera, 6867, 6885
Mammalia, 7041, 7042
Platyhelminthes, 10541
Spermatophyta, 2841, 2882, 6437, 13746, 13751, 17526

GEOGRAPHICAL INDEX

GUATEMALA:

Algae,	11808
Mammalia,	12455
Spermatophyta,	2841

HONDURAS:

Bryophyta,	2828A
Fungi,	2828A
Pteridophyta,	2828A
Spermatophyta,	2828A, 4769, 4785

NICARAGUA:

Mollusca,	12316
-----------------	-------

PANAMA and CANAL ZONE:

fauna,	1674
freshwater fishes, zoogeographic affinities,	1637
malaria,	12270
Panama Canal as passageway for fishes, etc.,	16051
Coleoptera,	6867, 10597
Diptera,	6895
Fungi,	4734, 11820
Homoptera,	3785
Hymenoptera,	14270
Mammalia,	3493
Myxomycetes,	4743
Pisces,	1637, 10623
Pteridophyta,	4758
Rotatoria,	6807
Spermatophyta,	2885, 6429

SALVADOR:

Spermatophyta,	4778
----------------------	------

WEST INDIES

West Indies (general):

agriculture,	1461
geology, bibliography and index,	5278
legumes for green manures in,	1207
zoogeography,	5374
Echinodermata,	10552
Pisces,	3803
Reptilia,	18055
Spermatophyta,	2864, 8429, 8440, 13778

BERMUDA: Echinodermata,

CUBA and ISLE OF PINES:

distomatosis,	14192
helminthiasis,	14192
intestinal parasites,	6720, 6748, 14192
Coleoptera,	6867
Protozoa,	6741, 14192
Lepidoptera,	6934
Lichenes,	8411
Myriopoda,	5124
Pisces,	5159, 10623

HISPANIOLA (HAITI and DOMINICAN REPUBLIC):

plant diseases,	15892
Diptera,	6895

Fungi,	1074, 17487
Onychophora,	12317
Pisces,	6961, 10623

JAMAICA:

plant diseases,	1461
-----------------------	------

LESSEE ANTILLES (from VIRGIN ISLANDS to GRENADA and BARBADOS):

Algae,	15434
Echinodermata,	10553
Isoptera,	14237
Spermatophyta,	11863, 11911

PUERTO RICO:

parasites of domestic animals,	17919
soil survey,	13848
tobacco industry in,	10187
Annelida,	17966
Bryophyta,	4752, 8418, 11843
Echinodermata,	10552, 19553
Hymenoptera,	8669, 10459
Insecta,	1487
Lepidoptera,	6936
Spermatophyta,	11861

TRINIDAD and TOBAGO:

plant diseases,	8599
Diptera,	6895
Hymenoptera,	14270
Mammalia,	5230
Mollusca,	(N) 6828
Reptilia,	18055

SOUTH AMERICA

South America (general):

geology of, bibliography and index,	5278
land mammals of, book,	5249
plant exploration notes,	6433
Aves,	18065
Lichenes,	8411
Mammalia,	5249
Pisces,	6947
Spermatophyta,	2846, 2856, 2867, 2881, 6406, 15500, 17536

ARGENTINA:

Calamuchita, radioactivity of minerals,	9596
Eucalyptus spp. for cultivation in,	6530
forest vegetation,	13774
giardiasis,	6715
plant diseases,	8610
Algae,	13726
Coleoptera,	5183, 6875, 8769, 10414, 12350
Homoptera,	17859
Lepidoptera,	8792
Mammalia,	(E) 7054
Reptilia,	6985, 10685, 16059
Spermatophyta,	6423, 6433, 13774, 15484

BOLIVIA:

Amphibia,	6978
Coleoptera,	8769
Hymenoptera,	14270
Myriopoda,	6831
Platyhelminthes,	10541
Pteridophyta,	4757, 11850
Spermatophyta,	8432

BRAZIL:

forests of,	10246
insect pests of cotton,	12192, 14116
lips of tadpole (Dendrophryniscus),	8820
myiasis,	3203
plant diseases,	5013, 6635, 12137
vegetation,	5387

Acanthocephala,	3286
Algae,	1064, 13723
Arachnida,	3321, 14241
Coleoptera,	6867, 6875, 6882, 8769, 10414
Collembola,	14277
Diptera,	6895, 8663, 10490, 12365, 12370
Hemiptera,	12377
Homoptera,	6916, 12381
Hymenoptera,	12231
Lepidoptera,	6932
Mallophaga,	3369
Mammalia,	12455
Nematoda,	1566
Pisces,	5160, 12420, (D) 12431, 5156
Protozoa,	12277, 12278
Pteridophyta,	1097
Reptilia,	6982, 6983
Spermatophyta,	2885, 8439, 10129, 11861, 13723

CHILE:

forests,	12008
Amphibia,	6980
Coleoptera,	3329, 6866, 6885, 12348
Crustacea,	6835, 12320
Fungi,	11831
Lepidoptera,	8792
Myriopoda,	6831
Pisces,	3385
Reptilia,	8823, 6984
Spermatophyta,	11894

COLOMBIA:

freshwater fishes, zoogeographic affinities,	1637
Coleoptera,	6874
Fungi,	11820
Lepidoptera,	6932, 12393
Pteridophyta,	4758
Spermatophyta,	2872, 2885, 10129

ECUADOR:

Coleoptera,	8769
Diptera,	12365
Odonata,	16047

Pisces,	10623
Platyhelminthes,	14192
Spermatophyta,	2872, 2872A, 4787, 8432, 10129, 11900, 13751, 17536

GUIANA (BRITISH, DUTCH, FRENCH):

dog helminths,	15956
trypanosomiasis,	15979
Bryophyta,	8417
Coleoptera,	6874, 6875, 8769
Diptera,	5090, 6895, 15935
Hymenoptera,	6928, 14270
Reptilia,	18055
Spermatophyta,	10129

PARAGUAY:

Coleoptera,	6875, 8769
Diptera,	6903

PERU:

flora,	(Cb) 2786
Amphibia,	5166
Aves,	7038
Coleoptera,	6875
Diptera,	6903
Hemiptera,	16035
Homoptera,	6916
Lepidoptera,	8792
Pisces,	8812
Pteridophyta,	1097, 4757, 11850
Reptilia,	5166, 18055
Spermatophyta,	2864, 2865, 2885, 6433, 8432, 11887, 11900, 15506, 17525, 17526

URUGUAY:

Algae,	13726
Crustacea,	6834
Pisces,	10628
Spermatophyta,	16386

VENEZUELA:

fauna,	(O) 3234
helminthiasis,	10511
Fungi,	6345, 13738
Mammalia,	12455
Myriopoda,	6831
Spermatophyta,	2881, 8429, 8440

EUROPE

Europe (general):

bird migrations,	8828, 8830, 8831
ectoparasites of fish,	3396
geology of, bibliography and index,	5278
phytogeography,	3515
phytogeography of lichenes,	8414
soil erosion and conservation in Mediterranean region,	5370
Crustacea,	3396
Fungi,	11823
Lichenes,	8411
central, phytogeography of East Alps,	3513
vegetation, interglacial,	9018

northern boundaries of Litorina Sea,	2782
southeastern, Crustacea,	8760, 10574, 12336
Spermatophyta,	13747

ALBANIA: Crustacea,

AUSTRIA:

fauna, ecology,	12617
fauna and flora,	10801
forests and forestry,	1287, 10274
limnology,	10803
trees and shrubs,	12012
vegetation,	7207
zoogeography,	7182
Algae,	8379
Arachnida,	6858
Aves,	5167, 8837

Fungi,	17492
Lichenes,	6367, 8415

BALTIC SEA:

Neurterea,	12303
Protozoa,	10530

BELGIUM:

bird-banding records,	6997, 6999, 10067, 16068, 16104
forests,	3026, 10244, 13933
Acarina,	12341
Aves,	6998, 7031, 8829, 16069, 16083
Coleoptera,	12188

BULGARIA:

cattle helminthiasis,	10500
equine trypanosomiasis,	12259
linguistulosis in goats,	8695
Arachnida,	10445
Crustacea,	6841, 6842, 6843

GEOGRAPHICAL INDEX

CZECHOSLOVAKIA:

forestry in, 1296, 1301, 10276
 vegetation, 7201
 Arachnida, 6357, 10684
 Crustacea, 6333
 Fungi, 6338, 8404, 15440
 Spermatophyta, 10157

DENMARK:

moss flora, 10788
 tuberculosis incidence in medical students, University of Copenhagen, 2380
 vegetation, 3518, 5382, 5383, 10787, 10788

weight-length determinations in salmon, 8814
 Aves, 5180, 5194, 16078, 16085
 Fungi, 6338
 Lichenes, 6365, 15473, 17503

ESTONIA:

flora, 3415
 Hymenoptera, 18026
 Spermatophyta, 17533

FINLAND:

forestry, 4891, 6534, 12002, 15621, 15622, 15650, 15654
 fossil diatoms, 2732
 game laws, 5419
 pools, biota, temp., water composition, sunlight effects, 3202
 mosquito plagues of Lapland, 3202
 swamp drainage, effect on forest growth, 15659
 Aves, 8832, 8833, 8850, 16092
 Coleoptera, 12201
 Hymenoptera, 18026
 Mammalia, 10660
 Protozoa, 10626
 Spermatophyta, 2881A, 2895, 17515

FRANCE (including CORSICA) and MONACO:

caves and cave faunas, 15942
 fauna of, 8681
 forestry in, 15628, 15672, 15678, 15681
 fossil fauna, 8681, 15944
 lichens of, 1087, 1088
 migration of eagles, 8828
 phytogeography, 128, 7208
 soil of, 11967, 15580
 vegetation, 125, 5380, 7198

Acarina, 10583
 Algae, 11804, (E) 17482
 Amphibia, 3397
 Angiospermae, 1146, 1151, 1153, 1154, 1156, 1156, 1156A, 1163

Arachnida, 17985
 Aves, 16065, 16074, 16090
 Coelenterata, (K) 15981
 Coleoptera, 3325, 3326, (J) 3327, 8653, 8771, 12188, 12545, 16030

Crustacea, 6836
 Diptera, 10435
 Echinodermata, (†) 14223
 Fungi, 1075, 1077, 2801, 8891, 8393, 8394, 11824

Hemiptera, 1627, 8341, 8343
 Homoptera, 8784
 Hymenoptera, 12387
 Lepidoptera, 1500, 12392
 Mammalia, 5210, (N) 5235, (PI) 16109, (PI) 16116, 16118

Mollusca, (E) 16069
 Pisces, 18040
 Platyhelminthes, 10542
 Protozoa, (N) 14199, (K) 15978, (K) 17925

Pteridophyta, 1102
 Reptilia, (Pr) 16057
 Siphonaptera, 8800
 Spermatophyta, 2832, 2892, 2902, 8441, 11906, 17512, 17544, 17546, 17547
 Thysanoptera, 8801

GERMANY:

cancer in, 4207, 4212, 13199
 chironomids in Grosser Plöner See, 9048
 fauna, 12579, 12580, 12611, (†) 15141, (†) 15943
 forestry in, 1303, 3024, 3031, 8036
 fossil flora, 4724, 4725
 fossil plants, (D) 10097
 geography of lichens, 1092
 infant feedings, 5797
 plant diseases, 15654
 vegetation, 123, 3509, 3516, 7188, 7196, 9026, 12605, 14394

Acarina, 10681, 12341
 Algae, 6381
 Annelida, 12308
 Aves, 8353, 8337
 Coelenterata, 6778, 6780
 Corrodentia, 12414

Crustacea, 6841, 8751, 8757
 Diptera, 14143
 Fungi, 6338, 8408, 11829
 Homoptera, 14129
 Hymenoptera, 3551, 18026
 Lichenes, 6365, 6367, 15473, 17503
 Mollusca, 12581
 Pisces, (D) 6971
 Platyhelminthes, 12302
 Protozoa, (K) 14199
 Reptilia, 12434
 Rotatoria, 6806, 14219
 Spermatophyta, 2869A

GREAT BRITAIN:

adenomatosis, 17918
 afforestation, 4889, 4900
 algal communities, 121
 climate, 16231
 fauna, 1827
 plankton, 10797
 seals of west coast, 5247
 vegetation, 118, 10785, 16253, 16257

Acarina, 14141, 14142
 Angiospermae, 1133
 Aves, 14305
 Diptera, 12193
 Fungi, 8388
 Homoptera, 17881
 Lepidoptera, 1500
 Mammalia, 16114
 Spermatophyta, 6432, 11857

ENGLAND:

biota of saline lagoon, 9042
 chalk flora, 129
 plankton, 12616
 snail and liver fluke distribution, 12261
 soil fauna, 12572
 vegetation, 16254
 vertebrates, insects, and poisonous plants, popular treatise, 10083
 Algae, (J) 17481 (Ter) 17482
 Aves, 14392, 14390
 Coelenterata, 3278, 15983
 Crustacea, 12334
 Diptera, 18006
 Hymenoptera, 1826
 Mammalia, (E) 5235
 Myxomycetes, 11832

IRELAND:

vegetation, 1841
 SCOTLAND:
 fauna and flora, book, 3414
 forestry in, 13031
 fossil plants, (Ob) 8568
 insect pests, of animals, control, 15916, 15917

medicine in, history, 5274
 plankton, 10794
 plant diseases, 6647
 poultry helminths, 6749
 red deer, 8635
 seasonal incidence of Ixodes ricinus in, 14142

Acarina, 15816
 Algae, 1066
 Aves, 14299
 Crustacea, 12331
 Gymnospermae, (Ob) 8370
 Lepidoptera, 12182
 Pisces, (Ob) 8813

WALES:

snail and liver fluke distribution, 12261
 GREECE, all AEGEAN ISLANDS and CRETE:
 malaria and child mortality, 15905
 Annelida, 6811
 Crustacea, 6842, 6938, 16021
 Spermatophyta, 8444, 10119, 10159

HUNGARY:

forests, 17652
 new botanical journal, 10706
 soil water and tree vegetation, 6531
 vegetation, 7202
 Arachnida, 10586, 17936
 Aves, 18064, 18067
 Diptera, 10600
 Nematoda, 8739

ICELAND, JAN MAYEN, and FAROE ISLANDS:

hot springs, biota, 7232
 vegetation, 16269
 Algae, 7227
 Lichenes, 8410

ITALY (including SARDINIA and SICILY) and MALTA:
 bird malaria, 8711
 conifers of, 13721
 forests, 8529, 8531, 8532, 8533, 8534, 10235, 13922, 17645
 forestry in, new periodical, 8897
 leishmaniasis vectors, 6738
 malaria in, 5098, 8696, 10604

parasitology, 6750
 phytoclimatic zones, 8540
 reforestation in Sicily, 15629
 Aves, 8837
 Bryophyta, 6373, 11838, 15477
 Crustacea, 6838, 6846, 14402
 Diptera, 8655, 8604, 8701
 Fungi, 6540, 18781, 13735
 Gastropoda, 3242
 Mollusca, (K) 16008
 Protozoa, 3255
 Spermatophyta, 13748, 13762, 13764, 13766, 13773, 15513

Thallophyta, 13741
 Thysanura, 12412, 12413

JUGOSLAVIA:

biota, 1833
 hydrobiology, 9045
 Annelida, 6810
 Arachnida, 6861, 6863, 14240
 Crustacea, 8750, 16016
 Fungi, 8399, 11817
 Myriopoda, 16014
 Spermatophyta, 17545

LATVIA:

forests and forestry, 1304, 13924, 13940
 Hymenoptera, 18026

LITHUANIA:

bird-banding studies, 12438
 Hymenoptera, 18026

MALTA. (See Italy.)

MEDITERRANEAN SEA (including ADRIATIC and AEGEAN SEAS):
 nanoplankton and climate, 16270
 Arachnida, 6847
 Crustacea, 6847
 Echinodermata, 6847

NETHERLANDS:

exotic trees grown in, 12014
 microscopy in, history, 7074
 plant diseases, 17759
 Coleoptera, 12188
 Nemertea, 3287
 Pteridophyta, (PI) 8422

NORTH SEA:

plankton, 9047, 9049, 12607, 16271
 Crustacea, 12321, 16017
 Nemertea, 12304

NORWAY:

climatic races of forest trees, 15642
 correlation of Cambrian faunas, 5083
 cultivated plants for honey production, 8671
 fisheries, 156
 gardening in, 1227
 lakes in, conductivity and pH, 12615
 pools, their biota, temp., water composition, sunlight effects, 3202
 pernicious anemia, statistical review, 635

succession after forest fires, 15643
 vegetation, 5384
 Algae, 11805
 Aves, 1644, 9071
 Fungi, 8395
 Mammalia, 10660
 Pteridophyta, 8424
 Spermatophyta, 6407

POLAND and DANZIG:

corn borer damage, 1494
 entomogenous fungi in, 8666
 Algae, (PI) 10102, (PI) 17483
 Arachnida, 6864
 Bryophyta, (N) 10101
 Hymenoptera, 18026
 Lepidoptera, 3355
 Lichenes, 17505
 Mollusca, (N) 6821
 Nematoda, 3284
 Rotatoria, 6807
 Spermatophyta, 6438, (M) 10100, (M) 10101, 17550

PORTUGAL:

Crustacea, 17970
 Hemiptera, 14259
 Homoptera, 14262, 14263
 Insecta, 16026
 Spermatophyta, 6425

RUMANIA:

flora, 2890, 13765
 forest insects, 15910
 malaria control, 1549
 Pinus silvestris in, 15515, 15516
 piroplasmosis, 1546
 vegetation, 3503
 Acarina, 1618
 Arachnida, 10587
 Aves, 5173
 Gastrotricha, 14322
 Spermatophyta, 2890, 2891, 4794, 11514, 11515, 11516, 13765, 13770, 13772, 17505

GEOGRAPHICAL INDEX

SPAIN (including BALEARIC ISLANDS) and ANDORRA:	
flora,	7219
Annelida,	6815
Brachiopoda,	(D)16001
Protozoa,	14198
SPITSEBERGEN (SVALBARD) and BEAR ISLAND:	
vegetation,	16256
Algae,	2791
Lichenes,	17504
SWEDEN:	
control of forest insects,	1512
correlation of Cambrian faunas, 5083	
gardening in,	1227
incidence of tuberculosis,	2386
limnology,	7229
pernicious anemia, statistical study, 4252	
sheep parasites,	5091
vegetation,	7203, 10790

Algae,	11805
Amphibia,	10631
Aves,	9071
Fungi,	4793
Hymenoptera,	18026
Lichenes,	15475
Mammalia,	10660
Protozoa,	10526
Pteridophyta,	4793
Spermatophyta,	4798, 6407, 17548
SWITZERLAND:	
bird migrations,	8846, 18086, 16087
forestry,	4885, 15627, 15635, 15664
limnology,	3522
tumor mortality, racial survey, 4194	
turtle dove in, habits of,	8848
vegetation,	7217, 16258
Algae,	10104
Aves,	8837
Fungi,	6338
Lepidoptera,	15909
Spermatophyta,	13766, 17549

TURKEY: (See under Asia.)	
UNION OF SOVIET SOCIALIST REPUBLICS:	
EUROPEAN RUSSIA:	
biology in,	7073
collective farming in,	1227
literature (1933-1935) on systematic botany,	1691
soil erosion and conservation, 5370	
vegetation,	3512
zoogeography of fish in Arctic rivers,	3396
Angiospermae,	1162
Hemiptera,	12379
Mammalia,	(E)5235, 10660
Myriopoda,	6831
Protozoa,	1587, 3271, 10526
NOVAYA ZEMLYA and FRANZ JOSEF LAND:	
correlation of Cambrian faunas, 5083	

AFRICA

Africa (general):	
endemic malaria,	8709
filariasis,	10503
geology of, bibliography and index,	5278
skin diseases in negroes,	12256
soil erosion and conservation, 5370	
trypanosomiasis,	15962
Angiospermae,	1127, 1130, 1138, 1142, 1144
Aves,	7010, 16062
Bryophyta,	11836
Diptera,	18005
Fungi, 6349, 8387, 17498, 17500	
Lepidoptera,	10668
Mammalia,	6968, 8809
Pisces,	1097
Pteridophyta,	2834, 17500
Spermatophyta,	8437, 15503
eastern: fossil remains from,	
malaria,	10634
medicinal and poisonous plants,	10288
schistosomiasis,	1574
tropical mosses,	1093
Coleoptera,	3322, 10589
Diptera,	6897
Myriopoda,	8749, 16013
Spermatophyta,	11870, 13767
northern: Coleoptera,	3328
southern: aboriginal African and Dutch plant names,	8443
forestry,	15663, 17651
intertidal fauna and flora, survey,	9005
meteorology,	16239
mite causing African sand-worm eruption,	15920
nutrition in children,	9580
relative humidity,	8979
schistosomiasis therapy, 10484	
soils of,	13853
vegetation,	9014
Acarina,	10579, 10580
Algae,	2793, 4729
Coleoptera,	6880, 10589
Diptera,	6894, 6896
Fungi,	17499
Pisces,	1639
Platyhelminthes,	6797, 15987, 15988
Siphonaptera,	14279
Spermatophyta,	8443, 13745
southwest: Fungi,	11830
western: frogs of, list,	6979
Diptera,	14252
Pisces,	8803
Spermatophyta,	2843, 6383, 10128

ABYSSINIA. (See Ethiopia.)	
ALGERIA:	
cork production,	12011
Coleoptera,	12349, 12351, 12352
Crustacea,	16013
Echinodermata,	(f)16007
Mollusca,	(E)16009
ANGOLA and KABINDA:	
Coleoptera,	14248, 14249
Crustacea,	(f)14233
Spermatophyta,	10148
BASUTOLAND. (See Orange Free State.)	

BELGIAN CONGO (including RUANDA and URUNDI):	
tannin sources,	1305
Aves,	5181, 18058
Diptera,	6894, 6897
Mallophaga,	6941
Platyhelminthes,	12300A, 15992
Protozoa,	1576
CAMEROONS (BRITISH and FRENCH MANDATES), RIO MUNI, FERNANDO PO, SAO THOME and ANNOBON:	
<i>Nephridiacaanthus</i> in cat,	3285
Myriopoda,	8748
Reptilia,	10633
CAPE PROVINCE (including BRITISH BECHUANALAND):	
Acarina,	17983
Aves,	6992, 6995, 7016, 7030
Coleoptera,	6832
Hymenoptera,	14269
Platyhelminthes,	6108
EGYPT and SUEZ CANAL:	
blood phosphorus, infants,	2848
dog and cat helminths,	10480
nutritional edema in children, 2350	
Ruwenzori Expedition, publications, 12494	
Algae,	2789, 15436
Coleoptera,	3331, 3332
Hymenoptera,	5068
Mammalia,	(E)5235
Thysanoptera,	6148
ERITREA:	
Fungi,	2800
ETHIOPIA:	
forests of,	12003, 15624
malaria virulence,	10504
vegetation,	12597
Fungi,	2800
Spermatophyta,	13744, 17541
Thallophyta,	13740
FRENCH WEST AFRICA (MAURITANIA, FRENCH SUDAN, NIGER TERRITORY, and TIBESTI):	
Coleoptera,	8778
Echinodermata,	(E)14226
Hemiptera,	12380
Spermatophyta,	11865, 11866
GOLD COAST and BRITISH TOGO:	
woods of,	3040
GUINEA (FRENCH and PORTUGUESE):	
Spermatophyta,	11867
KENYA COLONY and ZANZIBAR PROTECTORATE:	
animal husbandry,	10189
onchocerciasis,	15960
veldt management and productivity, 10189	
Diptera,	18005
LIBERIA:	
Diptera,	6894, 6897
Myriopoda,	8749
LIBIA, TRIPOLITANIA and CIRENAICA:	
plant diseases,	8607
Spermatophyta,	13775, 15511
MADAGASCAR:	
Acarina,	6851
Angiospermae,	1129, 1132
Spermatophyta,	2836, 10137
MOROCCO (including SPANISH ZONE and TANGIER):	
phytogeography,	7214
soil profiles and climax vegetation, 7204	

vegetation,	7206, 7209, 7218, 9029, 9048
vegetation and climate,	7192
Algae,	2788
Coleoptera,	5130
Crustacea,	8761
Echinodermata,	(Tr)16007
Homoptera,	6917
Hymenoptera,	6921
Mollusca,	(E)16009
Myriopoda,	6832
Spermatophyta,	2852
PORTUGUESE EAST AFRICA (MOZAMBIQUE):	
Vespidae, annotated list of,	3352
Coleoptera,	14246, 16031
Collembola,	3568
Dermoptera,	14231
Hymenoptera,	3352
Mollusca,	3297
Odonata,	12406
Reptilia,	3399
NATAL:	
agriculture in,	10186
Diptera,	6896
NIGERIA:	
helminthiasis,	8600
plant diseases,	12169
sleeping sickness,	8698
vegetation,	16263
Diptera,	6896
Echinodermata,	(K)14227
Mammalia,	(E)5235
NYASALAND PROTECTORATE. (See Rhodesia.)	
ORANGE FREE STATE and BASUTOLAND:	
Protozoa,	1583
RHODESIA (NORTHERN and SOUTHERN) and NYASALAND PROTECTORATE:	
human trypanosomiasis,	14161
onchocerciasis in,	6730
vegetation,	9034
Aves,	171, 5206, 7010, 7033, 7034
Bryophyta,	8423
Diptera,	6894, 6896
Pteridophyta,	8423
Spermatophyta,	8423
SENEGAL and GAMBIA:	
Spermatophyta,	2886
SIERRA LEONE:	
malaria,	14185
Fungi,	1072
SOMALILAND (BRITISH, FRENCH and ITALIAN):	
malaria rates,	8686
Fungi,	2800
SOUTHWEST AFRICA:	
Aves,	7023
Reptilia,	8822
SUDAN, ANGLO-EGYPTIAN:	
leishmaniasis,	6740
nim (<i>Azadirachta</i>) introduced into, 10282	
SUDAN, FRENCH. (See French West Africa.)	
SUEZ CANAL. (See Egypt.)	
SWAZILAND. (See Transvaal.)	
TANGANYIKA TERRITORY:	
vegetation,	127
Reptilia,	8624, 10636
Spermatophyta,	2828, 2870, 15483, 17541

GEOGRAPHICAL INDEX

TRANSVAAL and SWAZILAND:

- bone baccia at Sterkfontain, 9724
- high veldt vegetation and pasture management, 10202
- silviculture and forest products, 4892

- Acarina, 17983
- Diptera, 6896
- Homoptera, 18019
- TUNISIA:**
- Aves, 16075

- Coleoptera, 12349
- Platyhelminthes, 17929
- UGANDA PROTECTORATE:**
- Acarina, 17983
- Coleoptera, 6882
- Reptilia, 14290

ASIA

Asia (general):

- geology of, bibliography and index, 5278
- Spermatophyta, 11890
- central: origin of desert flora, 1157
- Aves, 16095, 16096
- eastern: succession and range of Cambrian faunas, 5083
- Angiospermae, 1125
- Spermatophyta, 11876
- southeastern, Aves, 16064

AFGHANISTAN:

- Spermatophyta, 11874

ARABIA (including ADEN, ASIR, HEJAZ, OMAN, YEMEN):

- Orthoptera, 3366

BURMA:

- lac cultivation in, 14102

- Coleoptera, 16027

CEYLON:

- bee-keeping in, 14154

- drug plants that can be grown in, 1838

- filariasis, 12249

- fruits of, culture, 1261

- soil erosion and conservation, 5370

- vegetation, 9008

- Coleoptera, 6880, 16027

- Hymenoptera, 14151

CHINA and HONG KONG:

- botanical explorations in, 6

- canine leishmaniasis, 12250

- hookworm, 8703

- malaria, 14171, 17924

- medical work by Japanese in, 17975

- plant diseases, 6643, 12141

- rat trichinosis, 17917

- schistosomiasis, 8693

- soil erosion and conservation, 5370

- tapeworm incidence, 17923

- Acarina, 10582

- Algae, 6334

- Annelida, 6812

- Arachnida, 3318

- Aves, 5172

- Coleoptera, 3329

- Crustacea, 12325

- Diptera, 3338

- Hemiptera, 6913

- Lepidoptera, 12396

- Mammalia, 5223, 7052, 12441

- Mollusca, 10557, 10565

- Pisces, 5155

- Platyhelminthes, 6802

- Protozoa, 17926

- Pteridophyta, 1097

- Spermatophyta, 2835

- 2833, 6391, 6418A, 6419, 8426

- 11876, 11889, 11891, 11892, 15610

CYPRUS. (See Turkey.)

FORMOSA (TAIWAN):

- limnology, 10802

- Angiospermae, 1118

- Annelida, 6814

- Aves, 16079

- Diptera, 6901

- Fungi, 1429

- Lichenes, 1091

- Pteridophyta, 1097

- Spermatophyta, 8426

INDIA (including BHUTAN and NEPAL; excluding BURMA):

- Anopheles infected with malaria plasmodia, 10442

- carcinoma, incidence, 7844

- climate in relation to pink bollworm on cotton, 3184

- commercial timbers, 13962

- Derris ferruginea in, 10466

- diet survey in Delhi Province, 10960

- diet surveys in Nilgiris and Travancore, 10953

- dracunculitis, 14181

- eggs of house flies, 3201

- forage grasses of, 10192

- forests, 10258

- growth-rate of trees in Bengal, 10231

- infantile malaria, 15972

- insect pests of tea, 1490

- lac cultivation in, 14102

- leprosy, study in children, at Saldaipet, 558

- malaria in, 10487, 10508, 12319, 12250, 15951, 15958, 15970

- physiogeography and malaria, 14191

- plant diseases, 3111

- plant principals as larvicides, 12223

- rhinosporidiosis, 3251, 3252

- soil erosion and conservation, 5370

- surra, 17903

- ticks, 11707

- vegetation, 5386, 9009, 9028, 10778

- Algae, 2787

- Angiospermae, 1159

- Annelida, 3289, 3290

- Coleoptera, 16027

- Diptera, 12225, 12226, 12358

- Hymenoptera, 1522, 14266, 14269

- Mammalia, 10658, (Ter) 10665, (Ter) 10666

- Fungi, 2811, 8409, 15458

- Pisces, 12225

- Platyhelminthes, 12300, 17944

- Protozoa, 3258, 6761, 6762, 6770

- Pteridophyta, 4755, 4756

- Reptilia, 6762

- Rotatoria, 6805

- Spermatophyta, 2878, 8427, 11876, 13777

INDO-CHINA, FRENCH:

- Angiospermae, 1113, 1114, 1115

- Echinodermata, 3413

- Nematodea, 10546

- Pteridophyta, 1109

- Spermatophyta, 8430

JAPAN:

- crabs of, distrib. and bibliog., 1616

- cephalopod lichen, 1090

- horticultural research in, 1269

- plant diseases, 4966, 5012

- soil erosion and conservation, 5370

- vegetation, 3505

- Algae, 1070, 8380, 8382, 8384, 8385

- Angiospermae, 1118, 1160

- Arachnida, 10588, 14242, 14243

- Aves, 8851, 16080, 16093, 16103

- Bryophyta, 1095, 6373

- Crustacea, 1616, 12336, 16020

- Echinodermata, 10554

- Fungi, 17500

- Gymnospermae, 1160

- Myriopoda, 6830

- Pisces, 12424

- Platyhelminthes, 6803, 17941

- Pteridophyta, 1101, 1106, 1108, 2816, 17508

- Spermatophyta, 6387, 6409, 6414, 6415, 6420, 6434, 8426, 13769, 17529, 17530

KOREA (CHOSEN):

- Crustacea, 12326

- Spermatophyta, 8426

MALAY PENINSULA (south of Siam):

- filariasis, 5094

- Angiospermae, 1116

- Aves, 1618

- Nematoda, 6752

- Spermatophyta, 11869

MANCHURIA:

- Fungi, 1421

- Mammalia, 7050

- Platyhelminthes, 12297

MONGOLIA:

- Mammalia, (E) 7043, 7053, (E) 7058

PALESTINE and TRANSJORDANIA:

- horticultural pests, 6693

- phytogeography, 9039

- vegetation, 10780

PERSIA:

- Diptera, 6906

- Spermatophyta, 2879

SIAM. (See Thailand.)

SIBERIA (excluding RUSSIAN TURKESTAN):

- climate, ecology, avifauna, 7025, 7026

- ecology of birds of Taimir Peninsula, 7024

- nesting habits of birds from, 8844

- fossil plants, 15432

- zoogeography of fish in Arctic rivers, 8396

- Aves, 7024, 7025, 7026, 16073

- Crustacea, 16015

- Fungi, 6356

- Mammalia, (Ter) 6241, 10660, 12442

SYRIA and LEBANON:

- Spermatophyta, 10119

THAILAND:

- ornithology and zoogeography, 1648

- Aves, 1648, 8827, 10638

- Coleoptera, 6880

- Diptera, 1619

- Lepidoptera, 8794, 8795

- Myriopoda, 8749

- Pisces, 6972

TIBET:

- birds, n. subsp. from,

GEOGRAPHICAL INDEX

CELEBES:

Coleoptera,	12346
Spermatophyta,	10127, 15488
JAVA:	
echinostomiasis,	17911
forest vegetation and afforestation in,	15680
growth of infants in Batavia,	4177
lead poisoning, black gums caused by melanin,	4300
medical research in,	1677
plants and animals of,	12469
vegetation,	7210, 7218
Coleoptera,	6880, 14130
Crustacea,	(E)12335
Mammalia,	1661
Mollusca,	(Pi)16010

Protozoa,	14198
Pteridophyta,	1097
Spermatophyta,	4791
NEW GUINEA:	
insect pests of cocoa,	14107
vegetation, survey,	3507
Acarina,	7014, 7015, 7022
Aves,	5185, 5186, 14253,
Diptera,	14254, 14255, 14256
Hymenoptera,	14266
Mammalia,	7055
Pteridophyta,	1097
Spermatophyta,	11864, 11868, 11882,
	11883, 11895, 13755

PHILIPPINES:	
College of Agric., publications,	7085
helminth control,	1562

plant diseases,	17851
soil survey,	4856
Angiospermae,	15509
Aves,	1658
Coelenterata,	3413
Crustacea,	14235
Fungi,	17500
Lepidoptera,	1506
Mammalia,	5237
Pisces,	6972, 8810
Pteridophyta,	1097
Spermatophyta,	15509, 17534
SUMATRA:	
Coleoptera,	6880, 6881
Mammalia,	12445
Myriopoda,	8749
Pteridophyta,	1097
Spermatophyta,	13761, 15505

AUSTRALIA

Australia (general):	
birds of,	3427
ectoparasites of birds and mammals,	6706
geology of, bibliography and index,	5278
limnology,	5394
soil erosion and conservation,	5370
vegetation,	3481, 7209,
	9020, 12586
Aves, 5187, 5201, 7007, 10641, 14293	
Collembola,	3371
Crustacea,	3307
Embiopoda,	6942
Fungi,	8407, 10112
Homoptera,	18016, 18017
Lichenes,	8411
Mollusca,	3279
Pisces,	5155, 6974
Platyhelminthes,	3279, 3280, 8683
Pteridophyta,	1097
NEW SOUTH WALES:	
Herbarium, contributions, new periodical,	16149
vegetation,	3502
Acarina,	3316
Algae,	6330, 13724

AUSTRALASIA

Aves,	5174
Coleoptera,	6872, 10595
Lepidoptera,	5144
Pisces,	6974
Spermatophyta,	6392

QUEENSLAND:	
vegetation,	1837
Aves,	5174
Coleoptera,	10595
Lepidoptera,	5144
Nematoda,	14214
Spermatophyta,	2888, 2859, 6405
Thysanoptera,	17864

SOUTH AUSTRALIA:	
Acarina,	3315
Aves,	5204, 14294
Collembola,	3371
Diptera,	8340
Lepidoptera,	5144
Mollusca,	3295
Thysanoptera,	3367

TASMANIA:	
ecology,	16268
Collembola,	3371
Crustacea,	17967
Pisces,	18048
Spermatophyta,	17518

VICTORIA:	
Aves,	5169, 5186
Collembola,	3371

WESTERN AUSTRALIA:

Aves,	5199, 7001, 10648, 10650,
	10653, 18066, 18082
Diptera,	6898
Hemiptera,	5068
Hymenoptera,	5068
Mollusca,	3295
Pisces,	6974

NEW ZEALAND (Including Auckland, Campbell, Chatham and Kermadec Islands)

afforestation in,	10267
forestry,	1285
insect parasites of <i>Sirex</i> spp., introduction of,	15926
insect pests of conifers,	15926
Aves,	5189, 5192, 10646, 18060
Crustacea,	10569, 12320
Fungi,	1417
Hymenoptera,	10458
Isoptera,	12411
Mammalia,	(N)5235
Pteridophyta,	13784
Spermatophyta,	10124

ANTARCTICA

(Including islands North to South Georgia and Macquarie Island)

geology of, bibliography and index,	5278
Sei whale, identity,	1660

vegetation,	7216
Aves,	7017
Bryophyta,	6369

Fungi,	6364
Lichenes,	6368, 10116
Mammalia,	7049

OCEANIC ISLANDS

ATLANTIC ISLANDS

ATLANTIC ISLANDS, EASTERN (north to AZORES, south to TRISTAN DA CUNHA and GOUGH ISLANDS):	
biota, endemism in, relation to speciation,	5283
Bryophyta,	11839, 11840, 11841
Coleoptera,	12343
FALKLAND ISLANDS:	
Algae,	13726

INDIAN OCEAN ISLANDS (Including Kerguelen, Crozet and Prince Edward Islands, excluding Ceylon and Madagascar)

sealing,	5219
Myriopoda,	12319
Pisces,	3384

PACIFIC ISLANDS

origin of biota,	34
birds of Chatham Islands, notes on distribution and life history, list,	10639

GALAPAGOS ISLANDS and COCOS ISLAND:

biota, endemism in, relation to speciation,	5283
Coleoptera,	6883
Nematoda,	8735
Pisces,	10623

HAWAIIAN ISLANDS:

biota, endemism in, relation to evolution,	5283
fouling organisms,	10793
horse parasites,	17897
parasite fauna,	17916
plant diseases,	3165
vegetation,	16234
Angiospermae,	1131
Coelenterata,	3413
Crustacea,	3413
Diptera,	1623
Homoptera,	3182
Mollusca,	3304, (Pi)14232
Nematoda,	10478, 10547
Pisces,	8815
Platyhelminthes,	10477
Spermatophyta,	6426, 11896, 11897,
	15490, 15502, 17524

MELANESIA (including BISMARCK ARCHIPELAGO, FIJI, LOUISIAD ARCHIPELAGO, LOYALTY, NEW CALEDONIA, NEW HEBRIDES, SANTA CRUZ, and SOLOMON groups):	
food plants of,	1241
soil erosion and conservation,	5370
weeds of,	1196, 1197

Algae,	8376
Angiospermae,	1128
Aves,	7013
Coleoptera,	8766, 8770, 8779, 8782,
	12357, 16034
Spermatophyta,	2858,
	4783, 8428, 8434, 10121, 10151,
	11878, 11898, 13761, 13768, 15507
MICRONESIA (including CAROLINE, BONIN, GILBERT, MARCANNE (or LADRON), GUAM, MARSHALL, PELEW, and VOLCANO ISLANDS):	
Coleoptera,	6873, 6874
Gymnospermae,	1111
Hymenoptera,	14265
Pisces,	6973
Protozoa,	(N)10517
Pteridophyta,	1097
Spermatophyta,	2858, 4780, 6382,
	11871

POLYNESIA (including COOK, EASTER, ELLICE, LOW (or TUAMOTU), ARCHIPELAGO, MANIHAKI, MARQUESAS, PHOENIX, SAMOA, SOCIETY, TONGA, TUBUAI and UNION groups; excluding HAWAIIAN ISLANDS):	
fauna,	1676, 10765
Angiospermae,	1131
Coelenterata,	3413
Coleoptera,	8780, 8781
Pteridophyta,	8421
Spermatophyta,	2858, 4780, 6431,
	8438, 11890, 15489

GEOGRAPHICAL INDEX

OCEANS

ANTARCTIC OCEAN: Prochordata, 6946
 ARCTIC OCEAN:
 mosquito plagues of, 3202
 plankton, 14395
 ultra-violet radiation, 10762
 Aves, 113
 Lichenes, 8410
 ATLANTIC OCEAN:
 meteorology, 14385
 phytoplankton of Gulf of Maine,
 135
 plankton, 9041, 14895

Aves, 7016
 Pisces, 3374
 eastern: Pisces, 18040
 northern: Sei whale of, 1660
 western: Pisces, 5160
 INDIAN OCEAN:
 Aves, 7016
 Crustacea, 17972
 SUEZ CANAL. (See *Egypt*.)
 PACIFIC OCEAN:
 phytoplankton of Gulf of California,
 134

Pleistocene land areas, and origin
 of biota of islands off California
 coast, 34
 Sei whale, identity, 1660
 Echinodermata, 3294
 Pisces, 10521, 10619, 12427
 eastern: whales, 12444
 Coelenterata, 3274
 Crustacea, 16015
 northeast: Annelida, 17963
 northern: Aves, 5188
 southern: Lichenes, 10116

GEOLOGICAL INDEX TO PALEONTOLOGICAL MATERIAL

(For introductory guide see page 1813)

PALEOZOIC

Paleozoic (general):	
arthropod origin during...	12333
Coelenterata,	10534
Pisces,	5162
CAMBRIAN:	
faunas of Northern Hemisphere, suc-	5083
cession,	
silicified stem, Missouri,	13718
Brachiopoda,	6818
Protozoa,	6771
ORDOVICIAN:	
fauna in Martinsburg shale, Pennsyl-	3236
vania,	
fauna, of Venezuela,	3234
Algae,	2784
Crustacea,	8756, 8759
Mollusca,	10561
DEVONIAN:	
fauna,	3235

flora,	3235
Catskill Delta, U. S. A.,	13716
of New York,	13716
of Pennsylvania,	13716
mycorhiza-like structures,	15438
plants,	10097
woods, annual rings absent,	10097
Brachiopoda,	16001
Bryozoa,	12311
Coelenterata,	10535
Echinodermata,	10556
Pisces,	6971, 12430, 12431
Pteridophyta,	2784
CARBONIFEROUS (MISSISSIPPIAN and PENNSYLVANIAN):	
faunas of Greenland,	5082
flora,	3235
flora of Illinois,	4726

flora of Peru,	2784
mycorhiza-like structures,	15438
ostracods of Illinois,	8680
plants,	8368
Brachiopoda,	3291
Echinodermata,	10555
Gymnospermae,	8370
Insecta,	3372
Mollusca,	3305, 8741, 14231
Pisces,	8813, 16053
Pteridophyta,	8372, 15430
Spermatophyta,	10095
PERMIAN:	
fauna,	3235
faunas of Greenland,	5082
plant fragments, of Siberia,	15432
Pisces,	10621
Reptilia,	16057

MESOZOIC

Mesozoic (general):	
faunas of Greenland,	5082
geology and paleontology of Ba-	
varian Alps,	15941
TRIASSIC:	
Echinodermata,	16007
Reptilia,	5165
JURASSIC:	
fauna of France,	15944

Algae,	15428, 17481
Coelenterata,	6778, 6780
Coleoptera,	3327
Echinodermata,	14223, 16007
Mollusca,	8742
Reptilia,	5165
CRETACEOUS (including COMANCHEAN):	
plants, taxonomy and nomenclature,	4723

Coelenterata,	15981
Crustacea,	14233
Echinodermata,	14227
Mollusca,	5121, 16008
Protozoa,	14196, 14199, 15978, 17925
Pteridophyta,	13717
Reptilia,	18052

CENOZOIC

Cenozoic (general):	
geology and paleontology of Ba-	
varian Alps,	15941
Crustacea,	12335

TERTIARY

Tertiary (general):	
floras, of Germany,	4725
plants, taxonomy and nomencla-	
ture,	4723
Algae,	17482
Echinodermata,	16007
Mammalia,	5084, 5241, 8867, 10665, 10666
Pisces,	12431
Pteridophyta, of America,	13717
EOGENE (PALAEOCENE, EOCENE, and OLIGOCENE):	
circumstances of extinction of <i>Meso-</i>	
<i>hippus</i> ,	5081
fruit and seed remains,	13720
giant oxyaenid from,	7043
significance of strata,	2781

Algae,	17482
Angiospermae,	2783, 4724
Arachnida,	14239
Crustacea,	8758
Echinodermata,	14226
Mammalia,	5216, 5225, 5235, 7054, 7058, 18094, 18108
Mollusca,	5119, 10558
Pisces,	5161
Protozoa,	10529, 14196, 14198, 14203
Reptilia,	3404
Spermatophyta,	10096, 17477
NEOGENE (MIOCENE and PLIOCENE):	
conifers of Italy,	13721
fruit and seed remains,	13720
new dog, from Colorado,	12460
plants, of California,	17475
rodents from North America,	7057
significance of strata,	2781
Angiospermae,	2783
Diptera,	5150
Echinodermata,	5112
Insecta,	3373
Mammalia,	5084, 5217, 7056, 7057, 10669, 12460, 14311, 18097

Mollusca,	6821, 6828
Pisces,	10627
Protozoa,	10517, 14196, 14198, 14199
Spermatophyta,	10099, 10100, 10101, 17478, 17479, 17480

QUATERNARY

(Including Pleistocene and post-Pleistocene)

boundaries of Littorina Sea,	2782
chem. composition of preglacial spruce	
wood,	4887
geography of Pacific land masses, 84	
Algae,	8371, 10102, 17483
Aves,	8836, 10667
Mammalia,	1656, 8867, 9724, 10659, 10667, 12443, 16108, 16109, 16110, 16113
Mollusca,	14232, 16010
Pteridophyta,	8422

SUBJECT INDEX

(For introductory guide see pages 1811-1812)

A

Abaca. (See also *Musa textilis*.)
 mosaic, insect vectors.....4978, 6645
 vascular disease, in Philippine Is., etiology.....4984
ABAPHOSFORA (Fungi) (p.1861²).....15453
Abaris (p.1876¹), n. sp.....10597
 Abbot, John, Georgia bird records.....5168
 Abderhalden reaction. (See also *Pregnancy, tests*.)
 in diagnosis of tumors.....5798, 16882
 in mixed infections.....9826
 in mono- and dizygotic twins.....1787
 Abdomen. (See also *Peritoneum*.)
 irradiation as affecting, rat.....5475
 leiomyofibromatosis.....16853
 muscle wall, permeability.....10835
 tumors, produced by wheat germ oil, rats.....13201
 Abetic acid, hemolytic action, and toxicity.....4112
 Abel, John J., biography.....21, 1682
Abies (p.1864¹). (See also *Fir*.)
 n. combs. and n. sp.....15486
 brown stain of, fungi and insects associated with.....1428
alba, damage by aphid and other causes, treatment of.....14129
 forests in France.....13928
 large specimen of.....10240
 natural regeneration in Italy, 18946
 silvical characteristics and management.....3016
borisii-regis, pollen.....10119
concolor, apical meristem morphology.....6446
 Ability. (See *Intelligence*.)
 Abortion, bovine, non-*Brucella* agents, tuberculosis causing.....15364
 canine, produced by gonadotrophic anti-hormones.....14687
Salmonella abortus canis and.....11635
 in ewes, *Spirillum ovis* and.....11721
 hormonal control, hamster.....11106
 induced by prolactin, rabbit.....11113
 infectious. (See also *Bang's disease*; *Brucella abortus*; etc.)
 acid vs. alkaline diet as affecting.....4677
Brucella and agglutinin relations in blood and milk.....6124
 in buffalo, *Corynebacterium equi* and.....2712
 immunization to, in calves and yearlings.....4538
 by formal-vaccine.....4539
 by lanolin-lycopodium-*Brucella* vaccine.....13530
 vaccines of graded virulence as affecting.....15172
 incidence, stable conditions and, 4674
 incidence and control, Denmark.....2685
 serodiagnosis, errors in blood tests.....2714
 by fresh-milk agglutination test.....6280
 methods compared.....2602, 6126
 slow agglutination test, errors.....8168
 transmission from horses to cattle.....11734, 11743
 vaccination statistics.....15366
 vaccine, lanolin-oil prep.....6110
 in mares, virus or dietary etiology (1).....8324, 15377
Abortiporus (p.1862³), n. sp.....6353
 Abortus bacteria. (See *Brucella abortus*; etc.)
 Abtin, metabolic fate, rabbit.....13144
 synthesis.....289
 Abscesses, in goats and sheep.....15358
 intramuscular, renal and subcutaneous, as pneumonia sequelae.....4620
 liver, *Aerobacter leporis* from, rabbit.....17448
 bacteriology, cattle.....1017
 pyogenic, etiology.....7868
Taenia solium associated with.....1589
 pulmonary, acute.....7867
Klebsiella pneumoniae from.....6178

Abcession, of mango and avocado fruits.....6505
Absidia (p.1861²) *blakesleana* (Protoab-sidia),.....6354
ramosa, in bovine abortion etiology.....15364
 Absorption. (See also *Diffusion*; *Permeability*; *Water, absorption*.)
 detn., of turbid or colored systems.....16389
 in digestive tract. (See under *Digestive tract*; *Intestine*; *Stomach*.)
 as influenced by agaric, abietic and lichesteric acids, fish.....4112
 by plants:
 of ammonium phosphate and sulphate, humic compounds as affecting.....17620
 of Ca, relation to organic acids, 8566
 of electrolytes by epidermal cells, factors affecting, *Allium*.....13993
 of minerals, factors affecting, wheat, kinetis.....4912
 relation to foliar diagnosis, potatoes.....13977
 transpiration as affecting, *Phaseolus*.....12091
 of N by barley, P and N in nutrient medium as affecting, 1350
 of N and S by oats, P as affecting.....12059
 of nutrients at various growth stages, tomatoes.....15730
 weeds.....6486
 of O and water, in various root zones.....6559
 of P and N, by algae.....15698
 by diatoms, factors affecting.....13975
 of prune pure, pH and cations as affecting.....13973
 of Rb bromide by potato discs, kinetics.....15701
 of Se by wheat, relation to S.....1409
 of sodium and K, by mangels and sugar beets.....17583
 of sulphonic acid dyes, relation to respiration.....3069
 of toxic elements, relation to antagonism.....13974
 of water, by orchid roots, factors affecting, by roots, relation to guttation.....8578
 temp. as affecting.....4941, 6485
 of Zn, weeds vs. cover crops.....6481
 of water by dry organic substances, detn. of curve constants, 15790
 Absorption lines, of cornea, in childhood, etiology.....14868
 Absorption spectrum. (See under *Spectrum*.)
Abuta (1865³), n. sp.....2865, 10129
 Acacia, as blood protein substitute, frog web.....258
 danger in transfusion.....1976
 effect on:
 blood proteins and cells.....1973, 7819
 liver function, dog.....16448
 renal function.....12643
 osmotic pressure of solns.....7255
 pyrogen produced by bacteria in, 15267
Acacia, introduction into California, 2851
catechu, culture of lac on.....14102
decurrens, cultivation in Dutch East Indies.....15631
 gall forming wasp on.....5139
 v. *molle*, volume table for.....13934
 yields in Java.....13938
 Acalyptidae (Diptera), p.1877⁴
 Acanthaceae (Dicotyledones), p.1867²
Acanthiza (p.1882²), review of genus.....5184
Acanthocephala (p.1870⁴), in dog and cat, Egypt.....10480
Acanthochitidae (Mollusca), p.1872¹
Acanthochitona (p.1872¹) *crinitus*, mantle cavity.....16011
Acanthocolpidae (Platyhelminthes), p.1869²
Acanthocybium (p.1879⁴) *solandri*, osteology, phylogeny.....6954
Acanthocyrops (p.1873³), n. sp.....6838

Acanthodactylus (p.1880³) *scutellatus*, Jacobson's organ, form and function.....15000
Acanthoderes (p.1876²), n. sp.....6883
Acantholycosa (p.1874²), n. sp.....10587
Acantholyda (p.1878²) *erythrocephala*, on *Pinus*.....14128, 14136
Acanthophis antarcticus, venom, action.....875, 5164, 14859
Acanthoponera (p.1878⁴), n. sp.....14270
Acanthoscelides obtectus, inert materials for control of.....12232
ACANTHOSPHAERIA (Fungi) (p.1861⁴).....15453
Acanthostigma (p.1861³), n. sp.....15453
Acanthostoma (p.1861³), n. spp.....17500
Acanthostoma (p.1874³), tax.....3371
 Acaprin, in priapism therapy, 12246
 Acariasis, human, due to *Pediculoides ventricosus*.....1513
 Acarina (Arachnida), p.1874²
 immunological relations, of *Dermacentor*.....9913
 pests of *Derris*.....12238
Acarospora (p.1862²), notes on spp., 8413
Acasta (p.1873²) *spongites*, variability.....10572
Accipiter (p.1881²) *n. nissus*, banding, 14296
striatus suttoni.....14306
 Accipitridae (Aves), p.1881²
 Acclimatization. (See also *Adaptation*; *Altitude*; *Training*.)
 of soybeans, in P. I.....4842
 Acenaphthanthracene, effect on growth of tumors in mice.....584
 Acenaphthene, effect on plant cells, 16159
 colchicine and.....16160
 Acephalina (Protozoa), p.1868⁴
Acer (p.1866²). (See also *Maple*.)
 distr. in China.....6418A
Hypoxylon canker.....14039
Taphrina on.....15451
campestre, *Helicobasidium* on.....13735
grandidentatum, *Taphrina* on.....2804
negundo, seeds, as food of red squirrels.....14312
pseudoplatanus, sap, pH and acid content.....1395
saccharum, leaf variation and phylogeny.....4776
 as relit in Oklahoma.....3506
 Aceraceae (Dicotyledones), p.1866²
 pollen in honey.....8670
Aceratagallia (p.1875⁴) *sanguinolenta*, life hist. and control.....17880
 as vector of potato yellow dwarf.....17794
Acerotisa (p.1869²), of east coast of N. America.....6798
Acetabularia (p.1860²) *mediterranea*, nuclear division and zygote formation.....10103
 Acetaldehyde, effect on adrenalin.....7811
 on respiration, fruit.....10323
 oxidation by yeast, mechanism.....10045
 Acetanilid, chronic poisoning by.....4135
 effect on blood pigments.....13178
 halogenated, antipyretic activity, 14806
 porphyrinuria due to, rat.....16444
 therapeutic index.....14793
 Acetarsone, arsenical derivatives of group, serological specificity.....13447
 cerebro-spinal fluid not trypanocidal after.....2304
 in syphilis therapy, and comparisons.....17264
 Acetic acid, citric acid produced by yeasts from.....13676
 diselenodi-, effect on metabolism, 13178
 effect on spermatogenesis, *Isoetes*, 7109
 halogenated. (See *Iodoacetic acid*.)
 ketogenic activity.....12643
 mercapto. (See *Thioglycolic acid*.)
 synthesis.....12039
 Acetic acid bacteria. (See *Acetobacter*.)
 Acetoacetic acid. (See also *Acetone bodies*.)
 benzyl-, hydrolysis by kidney.....9407
 conversion to glucose by rat kidney.....7434
 effect on liver metabolism.....5529
 β -hydroxybutyric acid-, system, redox potential.....7285
 utilization.....12643

Acetobacter, oxidases in, 15778
peroxidans, dehydrogenizing enzyme system, 13678
suboxidans, oxidation of perseitol to perseulose by, 11771
 Acetoin, in butter mfg., changes in content, 8085
 Acetone, detn. in biological fluids, 12643
 glyceraldehyde, studies, 10977
 vapor, effect on guinea pig, 18178
 14993
 Acetone bodies. (See also *Acetoacetic acid*; *Acetone*; *Butyric acid*; *B. hydroxy*; *Blood*; *Ketosis*; *Urine*.)
 carbohydrate utilization ratios with high acetone body conc., 12643
 in cow urine, silage in ration and, 4412
 detn. in blood, 5645
 metabolism, glucose as affecting, 16494
 Acetonuria. (See *Ketosis*.)
 Acetophenetidin, porphyrinuria due to, rat, 16444
 Acetophenone, O-nitro, metabolic fate, 7416
 Acetyl, detn., 16374
 group, rôle in antigenicity of bacterial polysaccharides, 9900
 Acetylarsan, cerebrospinal fluid trypanocidal after, 2304
 Acetylation, effect on antishock hemolytic horse serum, 13423
 Acetylcholine. (See also *Choline*; *Mecholyl*.)
 action, barbital as affecting, 11234
 central, 9383
 duration, conc. and, 16807
 in hypoglycemic shock, 7430
 as influenced by:
 chronic acid betaine, frog, 13182
 magnesium, 14815
 proteins, frog, 13159
 sparteine and K, 13158
 mydriatic, after sympathetomy, 5771
 anaphylactic shock and, 9885
 in blood, possibility, 9141
 in central nervous system, 13001
 development in chick embryo, 16643
 effect on:
 anesthesia, 4169
 autonomic nervous system, 5759
 avascular pieces of omentum, 4355
 biliary and pancreatic papillae, rabbit, 13137
 bit, 2250
 bronchi, 2250
 cardiac action of epinephrine, rabbit, 7736
 of low atm. pressure, 479
 central heat production, 11221
 circulation, ergotamine as affecting, 13173
 circulatory system, rabbit, 11228
 colon secretion, 363
 denervated superior cervical ganglion, 4028
 diuresis, pituitary and, 7557
 enzymatic breakdown of phosphocreatine, 402
 ganglia, physostigmine and nicotine as affecting, 7782
 gastric secretion, 2326
 birds, 9254
 heart, 401 7722, 9518
 11193, 11207, 14655
 cholesterol acetate as affecting, 4173
 grasshopper, 4115
 Panulirus argus, 13004
 thyroidectomized rat, 11051
 urea and anesthetics as affecting, 9548
 heart refractory phase, 4126
 hemopoiesis in anemia, rabbits, 11326
 intestine, 7795
 iris muscle, 4045, 13155
 leucocyte formation, 11213
 lung blood vessels, frog, 9574
 C genitalia, 16622, 16623
 muscles, drugs affecting, 7813
 frog, 468, 12649, 16641
 K as affecting, 14799
 quinine as affecting, 11240
 myotonic muscle, 11231
 nerve cord, cockroach, 16703
 nervous system, insects, 9562
 perfused lungs, 3775, 11047, 16800
 pressor action of epinephrine, cat, 14849
 rats, 9896
 salivary gland metabolism, 7748
 thermic rigors in cooled dogs, 14858
 thiobarbiturate action on heart, 525
 toxicity of nitro compounds, 14824
 vegetative centers, 14812
 ventricular vagal escape, 7727

Acetylcholine (continued)
 effect on (continued)
 visco-elastic properties of lungs, 7529
 formation by tissues, 404, 14664
 gastro-intestinal hemorrhage from, dog, 12643
 in heart muscle, strophanthin as affecting, 16787
 hydrolysis, deuterium oxide as affecting, 7741
 in intestine, vagotomy and denervation as affecting, 14657
 intracisternally applied, 2336
 liberation from brain tissue, ions as affecting, 14660
 from nerve trunks during stim., 11078
 by stim. of isolated nerves, 14658
 of pancreas, 16685
 -like substance in blood after eserine poisoning, 14666
 muscle sensitivity to, 14752
 digitalis as affecting, 401
 during perfusion with Na, K and Ca, 2131
 in nerves, synthesis and, 11079
 in nervous tissue and blood, crayfish, 11084
 in placenta and uterus, rabbit, 14685
 potential action mechanism, 2133
 rôle as chemical mediator in autotomy reflex, *Petrolisthes*, 13005
 synthesis in sympathetic ganglia, 16642
 trophic innervation of skin and, 11194
 in uterus of ovariectomized rats, estrin as affecting, 9394
 Acetylene rebreathing test, in detn. of heart stroke volume, 13120
 of valvular efficiency, 9523
 Acetylsalicylic acid. (See under *Salicylic acid*.)
 Achaes (p.1874), tax., 1616
 Achatina fulica, in Hawaii, 3304
 Achatinella (p.1872) *mustelina*, distr. and variation, 8747
 Achatinellidae (Mollusca), p.1872
 Achatinidae (Mollusca), p.1872
 Achatina (p.1874), n. sp., 14254
 Achilias (p.1874), n. spp., 17529
 Achillea (p.1867), n. spp., 1432
 millefolium, nematode gall of, 1432
 Achiosoma (p.1877), n. spp., 14254
 Achiridae (Fishes), p.1874
 Achirus (p.1879) *achirus*, sensory papillae, 3391
 Achlorhydria. (See *Achylia gastrica*.)
 Achlya (p.1861), spp. parasitic to fish, 15467
 ambisexualis, n. vars., 17685
 regularis, 15448
 Achondroplasia. (See *Rickets*.)
 Achorion, guinea pig susceptibility, 11647
 Achras zapota, propagation, P. I., 4876
 Achroia (p.1877) *griseola*, pupation hormone, species specificity, 2478
 Achromobacter (p.1861), respiration, trimethylamine oxide rôle in, 11774
 ropy chocolate milk due to, 17418
 globiforme. (See *Bacterium g.*)
 larvae, culture, and conditions affecting endospore germination, 1535
 inoculation of bee larvae with, 1536
 lipid, from cream, 2745
 electrical conductivity vs. NH₃ production, 2745
 radiobacter. (See *Bacterium r.*)
 viscosum. (See *Alcaligenes viscosus*.)
 Achtheres (p.1873), spp. on *Coregonus*, 3396
 Achylia gastrica, effect on blood ascorbic acid levels, 2388
 in hereditary hypochromic anemia, 13258
 hormones as affecting, in hypopituitarism, 9658
 incidence in leucocytosis, 11310
 secondary to Fe-deficiency anemia, 634
 secretory depressant in gastric juice, 13252
 test-meal analyses, anemia and, 5329
 vit. C conc. in, 13253
 Achyrocline (p.1867), n. spp., 2328A
 Acanthus (p.1865) *ledwardii*, 2338
 Aicicularia (p.1860) *marginata* (Terr.), 17482
 Acid(s). (See also *Amino acids*; *Bile acids*; *Fatty acids*; etc.; *Hydrogen-ion concentration*; and under specific acids, e.g., *Hydrochloric acid*.)
 abietic, hemolytic power and toxicity, 4112
 acetic and valeric, synthesis, 12039
 agaricic, hemolytic power and toxicity, 4112
 aliphatic series, as germicides, 10017

aromatic, germicidal action on tubercle bacilli, 15304
 in blood. (See under *Blood*.)
 in cheese, estimation, 4418
 diet. (See under *Diet*.)
 effect on reaction of tadpoles to light, 7615
 ferulic, cholagogue action, 4151
 in gastric juice and stomach contents. (See under *Stomach*.)
 inorganic, as germicides, 10017
 in legumes, Indian vars., 6454
 lichesteric, hemolytic power and toxicity, 4112
 loss from oranges, O and N as affecting, 12094
 malic and citric, in birch and maple sap, 1395
 organic, chemotropic action on seedlings, 15780
 in corn, pH and form of N as affecting, 12116
 decomp. by intestinal flora, 2307
 effect on spore germination, 15737
 metabolism, in *Bryophyllum*, 15770
 in buckwheat, 15768
 in Crassulaceae, 15769
 rôle of citric acid in, 8532
 in succulents, 15769
 in plants, Ca absorption as affecting, 8566
 angulic acid descr. from *Polyporus* (fungi), 13734
 in *Passiflora incarnata*, 6545
 resistance to, by pathogenic vs. saprophytic mycobacteria, 8277
 in rhubarb, vars. compared, 4873
 in *Sarcostemma acidum*, 3045
 in shelled corn, deterioration and, 4855
 soil. (See under *Soils*.)
 volatile, detn. in blood and tissues, 10904
 of wine and grapes, 6270
 Acid-alcohol fastness, of bacteria, significance, 13600
 Acid-base equilibrium. (See also *Acidosis*; *Alkali reserve*; *Alkalosis*; *Ketosis*.)
 effect on:
 blood fat distr., 7356
 lymph tissue, 1967
 toxicity of S. rats, 16457
 hypoglycemic shock and, 7430
 as influenced by:
 milk intake, children, 11265
 prolonged exposure to CO₂, dog, 12642
 sulfanilamide, 12642
 temp., 4056
 law of mass action in, 5433
 nervous-humoral control, review, 11085
 rôle in effort syndrome, 372
 variation, effects in osteomalacia with nephritis, 14669
 Acid-fast bacteria. (See *Bacteria, acid-fast*.)
 Acid-fastness. (See *Bacteria, acid-fast*.)
 Acidity, effect on vit. C, tomatoes, 15739
 of peaches in storage, temp. as affecting, 17628
 Acidobacterium moroi, purulent meningitis due to, 17303
 Acidophilous plants. (See *Silicicola*.)
 Acidophilus bacteria. (See *Lactobacillus acidophilus*.)
 Acidosis. (See also *Acid-base equilibrium*; *Alkali reserve*; *Ketosis*.)
 effect on:
 electrocardiogram, man, 5709
 lymph formation, 12744
 toxicity of nitro compounds, 14824
 mechanism of production, 7350
 in obstructive jaundice, anemia and, 16913
 rôle in production of diabetic coma, 4293
 Acinetidae (Protozoa), p.1868
 Ackama muelleri, *Xylobolium* on, 8407
 Ackee. (See *Bignonia sapida*.)
 Ackerknecht organ, occurrence in primates, 7929
 † *Acmæa* (p.1872) (J), n. sp., 15943
 Acmæidae (Mollusca), p.1872
 Acmæodera (p.1876), n. spp., 5131
 14245, 17999
 ACMOSTEMON (Dicot.) (p.1867), 10148
 Acne. (See under *Dermatoses*.)
 Acoetidae (Annelida), p.1871
 Aconitic acid, detn., 16312
 Aconitine, effect on auricle, 7726
 Aconitum (p.1865), n. var., 13776
 form and behavior of chromosomes in tetraploid, 5285
 pharmacological research, need for, 6538
 pseudaconitine from, use in hunting, 8559

- Acoustics. (See also *Hearing; Sound.*)
 methods of study, 234
 Acoustic nerve. (See *Nerve, auditory.*)
 Acquired characters, inheritance, modified concept, 11380
 new evidence for, 3440, 3441
 new evidence against, 12500
 Acrasiales (Myxomycetes), p.1861²
 Acrididae (Orthoptera), p.1875¹
 Acridine diaminomethyl, effect on relapsing-fever vs. *Trypanosoma rhodensiae*, 13542
 dibenz-1, 2, 5, 6, effect on growth of tumors in mice, 584
 derivatives, effect on heart, frog, 7807
 in gonorrhea, 4574
 dyes, effect on *Clonorchis sinensis* in vitro, 4552
 in giardiasis therapy, 6141, 14192
 Acridoxanthine, related pigment, from excreta of migratory locust, 12183
 Acriflavine, in trichinosis therapy, 8713
Acris (p.1880²), chromosomes, form and number, 10722
Acroboles (p.1870¹) *variabilis*, redescr., 16000
Acroboloides (p.1870¹), microsporidia from, 16000
 enoplus, 16000
Acrocera (p.1864²), n. comb., 5427
 Acroceridae (Echinodermata), p.1871¹
Acrocerinus (p.1871¹)(Cb), spp., 10555
 Acrolein, toxicity, in garlic, 4902
 Acromegaly. (See also *Pituitary body*), case report, 16933
 cutis verticis gyrate as symptom, 2406
 insulin sensitivity in, 379
 thyrotropic activity of urine in, 14966
 Acromelanism, in mouse, 12451
 Acromictinae (Lepidoptera), p.1877¹
 Acrotidae (Pisces), p.1879⁴
 Acrotretidae (Brachiopoda), p.1871¹
Acrotus (p.1879⁴) *willoughbyi*, from Vancouver Island, 3377
 Acterol. (See *Ergosterol, irradiated.*)
Actinia (p.1869⁴) *equina*, nervous system, histology, 17066
 Actinistia (Pisces), p.1879¹
 Actinobacillosis, in animals, India, 11746
Actinobacillus pseudomallei. (See *Malleomyces* p.)
 Actinocephalidae (Protozoa), p.1868⁴
Actinocephalus (p.1868⁴), in Japanese beetle, 1580
Actinocheila (p.1866³), identity, 15497
 Actinodaphne, fats from, chemistry, 12045
 Actinograph, for measuring daily amts., 16243
 Actinometry. (See *Light measurement.*)
Actinomyces (p.1861³) antigenic relationships and methods, 8116
 chitinolysis by, 2774
 food poisoning by organism resembling, 13869
 human infections by, forms compared, 4616
 identification, 4616
 medium for, 2774
 in soils and composts, 4703
 on sweet potato, pathogenicity tests, 8169
 asteroides, human infections by, 4616
discofoliatus, maxilla infection by, 4644
 morphologic and biologic characters, 4644
 erythropolis, decomp. of aldehyde by, rôle in wheat rootrot, 12144
hominis, human infections by, 4616
madurac. (See *Mycetozoa*.)
melanosporus, from sinus pus, 9975
nerophorus. (See also *Bacterium nerophorum*.)
 in abscesses of bovine liver, 1017
 scabies. (See also *Potato scab*.)
 immunity of *Solanum* spp., 14084
 pathogenicity, soil fungi and, 17821
 on potato, control by calomel treatment of soil, 3169
 field testing for resistance, 1452
 growth in culture no index of virulence, 12152
 soil reaction as affecting, 12156
 in potato scab, pathogenic races, 6670
 Actinomycetaceae (Bacteria), p.1861¹
 Actinomycetales (Bacteria), p.1861¹
 Actinomycetes, in cellulose decomp., 11784
 of mouth, 17446
 polysaccharides formed by milk and soil forms, nature, 3365
 soil, auxin production by, 17435
 environmental factors as affecting, 16836
 tyrosine transformation to pigments by, 17437
 thermophilic, in soils and composts, 4703, 8350
 Actinomycosis. (See also *Actinomyces; Mycosis.*)
 in animals, India, 11746
 of cervix uteri, 8223
 human, strains associated, 4616
 pulmonary, case study, 11645
 of upper maxilla, 4644
 Actinophilous (p.1864⁴), tax. notes, 11860
 Actinopoda (Protozoa), p.1868²
 Actinopteri (Pisces), p.1879¹
 Actinosphaerium (p.1868²) *etchhorni*, voluminal relation between ectoplasm and endoplasm, 8917
 Actinostrobilus (p.1864⁴), suspensor and embryo, 1164
 Actinozia (p.1874⁴), monograph, 17984
 Action current(s). (See also *Electric potentials*; and under *Heart, Muscle, Nerve.*)
 calculation, in *Nitella*, 3070
 in *Halicystis*, O₂ as affecting, 3095
 in *Nitella*, Ca as affecting, 3077
 nature and relation to salts, 1392
 relation to arrhythmia and block, 1893
 Actitis (p.1881²) *macularia*, *Cloacitrema* in, 17939
 nesting data, 10644
 Activators. (See under *Enzymes.*)
 Activity (body). (See *Body activity; Exercise; Work*; etc.)
 Acuariidae (Nematoda), p.1870³
Aculopage, n. sp., 6341
Adaculum (p.1874³) *robustum*, odoriferous glands, 3820
 ADAPSLIA (Dipt.) (p.1877⁴), 14253
 Adaptation. (See also *Acclimatization; Commensalism; Mimicry; Pollination; Symbiosis.*)
 to alarming stimuli, effect on resistance to other stimuli, rat, 3911, 3912
 aquatic, of reed rush insects, 107
 for fossorial vs. arboreal life, rodents, 16106
 of insect fauna in lakes of northern U. S., 8999
 of mouth parts of *Anapus testudo*, for feeding, 1853
 to new conditions in *Artemia salina*, 3523
 nocturnal, in tarsier, 5237
 of plants for dissemination, 7208
 in pneumatic system of pelican, 5196
 protective coloration and protective reflectivity, of desert reptiles of U. S., 18053
 for restricting dispersal in plants of Palestine, 9039
 rôle in evolution, 1692
 rust fungi to Arctic, 8396
 of xerophytes in relation to habitats, 130
 Adaptometer, portable dark, descr., 11126
 Addiction, drug. (See under specific drugs, e.g., *Morphine*.)
 Addison's disease, adrenal cortex extract as affecting, 14977, 14978
 carbohydrate metabolism in, 587
 individual survival periods, 4279
 oral therapy with cortical extract, 3921
 sodium, K, Cl, in urine and blood, 5854
 steatorrhea, adrenal cortex hormone and, 16938
 water intake as affecting, 3674
 Adeleidae (Protozoa), p.1868⁴
Adelges (p.1875⁴) *abietis*, on *Picea excelsa*, 3193
 ADELONEURA (Protorth.) (p.1875⁴) *thompsoni* (Cb), 3372
 Adenine, compounds, deamination by *Bact. coli*, 296
 effect on blood sugar, 12756
 on growth, *Obelia*, 2045
 Adenine nucleoside. (See *Adenosine*.)
 Adenine nucleotide. (See *Adenylic acid*.)
 Adenoid tissues. (See also *Lymph nodes; Lymphoid tissue; Spleen*; etc.)
 nasopharyngeal, ablation, effect on rheumatic fever, 617
 Adenomatosis, epizootic pulmonary, relation to verminous pneumonia and jaagsiekte, sheep, 17386
 Adenosine. (See under *Phosphoric acid esters*.)
Adenosma (p.1867⁴), n. sp., 11895
 Adenylic acid. (See under *Phosphoric acid esters*.)
 Aedeorbididae (Mollusca), p.1872¹
 Aedeopaga (Coleoptera), p.1876¹
 Aedermin. (See *Vitamin E*.)
 ADHAERENTIA (p.1868²) *midwayensis* (f)(Prot.), 10529
 Adhesions, peristigmoid, in ♀♀, 9259
 Adhesive(s). (See under *Insecticides; Sprays.*)
Adiantites (p.1864¹), n. spp. (Cb), 2786
Adiantum (p.1863¹), n. spp., 1097, 8421
 in dung of ground sloth, 7048
Adina spp., distrib. in Netherlands East Indies, 2904
Adinandra (p.1866²), n. sp., 8426
 Adipose tissue. (See also *Fats*.)
 diastase in, denervation as affecting, 14535
 infra-red as affecting, 5468
 orbital, changes in exophthalmos, 14973
 Adiposity. (See *Obesity*.)
 Adiposogenital dystrophy, juvenile, treatment, 385
 Adolescence. (See also *Sex, maturity*.)
Adonia (p.1876²) *variegata*, statistical study, 14250
 Adrenal glands. (See also *Epinephrine*.)
 ablation, accessory tissue after, rats, 5632
 antidiuretic substance excreted after, electrolyte imbalance and, 12643
 asthenia after, toads, 3821
 blood acetone bodies as influenced by ant. pituitary extract after, rat, 12643
 diabetes insipidus and, blood sugar in rats with, 12643
 effect on:
 blood clotting time, 12643
 blood K response to cortical extract and hypertonic KCl, cat, 7389
 blood sugar in diabetes insipidus, 12643, 14965
 blood and urine ketones, rat, 12972
 carbohydrate metabolism, 11065
 ant. pituitary extracts and, 12985
 carbohydrate and mineral metabolism, cortin and NaCl as affecting, dogs, 3658
 chloride distr. between plasma and erythrocytes, 12751
 diabetogenic activity of ant. pituitary, dog, 3837
 excretion of radioactive Na and K, rat, 7247
 fat absorption, rat, 9247
 hepatic glucose output, insulin and glycine as affecting, dog, 7338
 histamine metabolism, rat, 12643
 hypertensive rats, 7708
 insulin action, 2305
 during fever, 14868
 intestinal absorption of fats, 12643
 of NaCl, rat, 7506
 of sugar, 7499, 16565
 liver glycogen and bisulfite binding capacity of blood, rat, 10903
 metabolism, ant. pituitary extract as affecting, rat, 12643
 mineral metabolism, 9287
 ovarian response to gonadotrophic extracts, rat, 12941
 potassium balance, 2036
 potassium tolerance, rat, 5639
 prenatal development, rat, 15025
 reimplanted tumors, rats, 11282
 renal function, 7565
 retina response to insulin, thyroxin and epinephrine, 12939
 salt taste threshold, rat, 9359
 seminal vesicles and prostates of castrated mice, 12643
 sensitiveness to hemorrhage, 16426
 sensitivity of vagina to estrone, rat, 14643
 sodium and K excretion, rat, 12643
 thymic involution, rat, 3803
 urine flow from denervated kidney, anoxia as affecting, 12643
 uterine excitability, rat, 9326
 work performance, corticosterone as affecting, rats, 12643
 electrolyte imbalance vs. excretion of anti-diuretic substance after, cat, 12974
 epinephrine toxicity after, rat, 9577
 pancreatectomy and, carbohydrate metabolism after, dog, 12643
 physiol. changes after, histamine pretreatment as affecting, 12643
 splanchnic nerve stim. and nicotine after, cat, 13000

Adrenal glands (continued)

ablation (continued)

- survival after, as influenced by:
 - castration, rat, 3852
 - cortin, rat, 12983
 - high yeast diet, rat, 14561
 - luteinization, rat, 7539
 - progesterone, 7548, 12943
 - other hormones and, ferret, 5623
 - individual periods, 4279
 - pseudopregnant cats, 9288
 - water intoxication after, sex hormones as affecting, 380
 - accessory cortical tissue in, 15087
 - androgenic action in castrate rat, 7537
 - apoplexy, thrombophlebitis of adrenal veins and, 18099
 - cholesterol in, human fetus, 9425
 - cortex, activity of crystalline cortin-like substances, 9382
 - blood K and, dog, 3865, 3866
 - cyclic changes in, ♂ starling, 2157
 - effect on:
 - activity of sympathetic nerves, 9371
 - bone growth, 11063
 - childhood asthma, 18191
 - fluid metabolism, post-pituitary and, rat, 7538
 - glycopenic function, 12643
 - hypertrophy due to cholesterol, serum and work, rat, 9314
 - to serum from fatigued athletes, guinea pig, 3898
 - as influenced by:
 - carbon tetrachloride, rat, 3835
 - cortin, hypophysectomized rats, 3839
 - pituitary extracts and other hormones, pigeons, 12977
 - sex hormones, rat, 11062
 - thyroidectomy and gonadectomy, 12984
 - thyroxine, rat, 3840
 - insufficiency, kidney function in, rat, 3945
 - rôle in prostatic differentiation, rat, 13042
 - tumors, disturbances of carbohydrate metabolism and, 587
 - pseudo-sexual precocity and, 5860
 - in vitro production of antisuabstance to, 3863
 - X-zone as influenced by sex hormones, 3981
 - by testosterone, mouse, 3916
 - cortin-like action of progesterone, rat, 3827
 - cysts, relation to breast cancer, rats, 16834
 - in diabetes of bearded women, 9657
 - disease, avitaminosis A and, 9664
 - embryonic sympathoma, metastases to lungs and brain, hist., 5805
 - in etiology of osteomalacia, with psychosis, 2411
 - in exptl. hypertension, renal ischemia and, 11196
 - extract, of cortex, androgenic action, 11054
 - bioassay, 2127, 9370
 - chemistry, 3891, 3892
 - 3893, 3894, 3895, 3918
 - 3919, 9347, 9348, 16383
 - corticosterone, effect on renal diabetes, 529
 - on work performance of adrenalectomized rats, 12643
 - desoxycorticosterone, dosage required for survival in adrenalectomized dog, 16634
 - effect on:
 - Addison's disease, 14978
 - adrenal insufficiency, 7901
 - mammary growth, ♂ mice, 12996
 - ovipositor lengthening of ♀ bitterling, 9293
 - uterus, 9303
 - estrogenic action, 12987
 - progestational activity, 12643
 - 12997
 - effect on:
 - activity of sloth, 12935
 - Addison's disease, 14977, 14978
 - steatorrhea and, 16938
 - adrenals, thymus and body wt., rat, 9321
 - basal metabolic rate in thyrotoxicosis, 7900
 - blood Na and Cl, 3850
 - body wt., rat, 12938
 - Ca and P balance, 2085

Adrenal glands (continued)

extract (continued)

- effect on (continued)
 - carbohydrate metabolism, hypophysectomized rats, 3901
 - 9194, 12813
 - protein metabolism and, rat, 12643
 - lactation, 3889
 - liver glycogen, ferret, 12952
 - metabolism of hyperthyroid dogs, 390
 - muscle electrolytes, 473
 - pancreatic diabetes, 12643
 - survival and work capacity, eviscerated rats, 3841
 - uterus of rabbit, 9303
 - oral assay, rat, 5610
 - oral therapy in Addison's disease and in adrenalectomized dogs, 3921
 - prep. and assay, 9328
 - in psychoses, 3858
 - refractory state produced by, 9313
 - subcutaneous implantation, rat, 3842
 - synergy with thyroxine on tadpole metamorphosis, 377
 - therapy, review, 9379
 - effect on color of lizards, 3937
 - ♂ sex-stimulating and ♀ sex-repressive fractions, 9356
 - refractory state after repeated injections, 12643
 - in scurvy, thyroidectomy and, 16918
 - function, diathermy as affecting, 7279
 - hypo-, water exchange, pitressin and, 14981
 - in pellagrins, 14945
 - hypertrophy during continued work, rat, 5629
 - hypophyso-, synergy, carbohydrate metabolism and, 12643
- as influenced by:
 - ant. pituitary extracts, 5647
 - anthrax infection and vaccination, 4679
 - avitaminosis B₂, 14951
 - estrogens, 16980
 - vs. hypophysis, 9639
 - hypophysectomy, hist., rats, 2439
 - ovariectomy, rat, 14608
 - section of pituitary stalk, rat, 3930
 - thyroxine, temp. and, 392
 - ingestion, therapeutic effects, 4268
 - innervation, cat, 16976, 16979
 - insufficiency, desoxycorticosterone as affecting, 7901
 - effect on:
 - heart, 9518
 - intestinal vol., factors affecting, 12643
 - serum electrolytes and water exchange, pitressin as affecting, cat, 12643
 - sodium, K, Cl, in urine and blood, 5854
 - expt'l. monkeys, 12643
 - lesions, hypertension and, 4092
 - in malaria, 8654
 - medulla, nicotization as affecting, guinea pig, 14642
 - melanophore regulation by, *Anolis*, 3936
 - nuclei of cortical cells, differential staining method, 15042
 - path., vit. C and, 7897
 - pheochromocytoma, pressor effects, 9516
 - regeneration of cortical cells in, 4308
 - relation to heat effect on circulation, 13102
 - review, 7244
 - rôle in activity of sympathetic nerves, 394
 - in exptl. hypertension, 12643
 - in exptl. masculinization of pullets, 11416
 - in sympathico-endocrine syndrome, 2404
 - secretion, denervation as affecting, dog, 9336
 - effect on blood pressure reaction to anoxia, 7544
 - in hyperthyroidism, 12643
 - sex hormones produced by, 9286
 - sodium factor, 12643
 - transplants, differentiation in ant. chamber of eye, rats, 5901
 - to eye of adrenalectomized rat, 12643
 - homoplastic eye, rat, 3924
 - persistance of medullary tissue in, 13305
 - success of relative to genetic relationship, rat, 3843
 - vit. C in, hemorrhage and, in diphtheria, 16937

Adrenal glands (continued)

vit. C (continued)

- in infantile scurvy, 16921
- in tuberculosis, 7890
- Adrenalin. (See *Epinephrine*.)
- Adrenalone, effect on hemostasis, rabbit, 14804
- subclinical, androgen-estrogen ratios in, 651
- Adrenoxine, effect on intestine, 14810
- Adsorbents. (See also *Absorption*; and under specific adsorbents, e.g., Charcoal, Infusorial earth, Kaolin.)
- for amino acids, 12720
- effect on snake venom, 3636
- intestinal, effect on intestinal motility, 13178
- Absorption. (See also *Films*; *Surfaces*.)
- of benzpyrene, carcinogenic action and, 574
- methods, 7245
- of methylene blue by erythrocytes, infants, 14869
- of nutrient ions on soils, methods of study, 2928
- of vit. A by porous powders, 5553
- by soaps, 7471
- Adventive plants. (See also *Weeds*; *Ruderals*.)
- Acididium* (p.1862?), tax., 15457
- 17498, 17500
- from Venezuela, 6345
- Aedes* (p.1877?). (See also *Mosquitoes*; *Stegomyia*; *Yellow Fever*.)
- near Bombay, 12358
- in California, 12359
- Japanese epidemic encephalitis transmitted by spp. of, 952
- life history, 3202
- in salt marsh, rel. to flora and salinity, 12214
- as vectors of filariasis, 12262, 15968
- acgypti*, development of filaria in, 6721
- eggs, killed by petroleum oil, 12224
- fluid adsorption by larval tracheal system, 5137
- transmission of yellow fever cultured virus negative, 6220
- venom stability in vitro, 13455
- dorsalis*, in California, 14138
- geniculatus*, in rock pot-holes, 10435
- leucocelaenus*, yellow fever virus in, 13581
- mariae*, from salt and polluted water, 10435
- stephensi*, malaria infection, protosil as affecting, 15186
- togoi*, in Hong Kong, 8658
- triseriatus*, as vector of yellow fever, 12210A
- yellow fever virus behavior in, 13558
- vezans*, trap records, 12221
- Aegilops*, *Triticum*, *Aegilotriticum*, hybrids of, progenies, 7128
- Aegilotriticum*, *Triticum*, *Aegilops*, hybrids of, progenies, 7128
- Aelia acuminata*, ecology, 12580
- Aelothrips* (p.1875?), n. spp., 5148
- Aeolidiidae* (Mollusca), p.1872
- Aeolosoma* (p.1871?) crassum, 6815
- Aeolosomatidae* (Annelida), p.1871
- Aequorea* (p.1869?), nematocysts descr., syn., 15984
- Aeration system. (See various aeration structures, e.g., *Pneumathodes*; *Stoma(ta)*.)
- Aerator, for water cultures and aquaria, 17742
- Aerobacter* (p.1861?), citric acid oxidation by spp., 11760
- milk-containing media for, 10075
- N metabolism, 2751
- in urogenital tract infections, 15263
- aerogenes. (See also *Bacterium aerogenes*; *Mycoderma decolorans*.)
- comparisons of intradermal agglutinability and in vitro tests for, in chronic infections, 11653
- gas in limberger cheese due to, 10065
- sugar-alcohol utilization by, 2757
- in water, culture media for, 996
- alcaligenes*, coconut milk media for, 4707
- cloacae*, sodium mucate decomp. by, 9990
- ropy milk due to, 1035
- indologenes*, glucose fermentation by, aldehydes and fatty acids as affecting, 11763
- leporis*, from liver abscess in rabbit, 17448

- Aerobacter-Escherichia* group of bacteria, ice cream mix pasteurization effects as criterion of efficiency, 17417
milk content, culture media for detn., 6287
- Aerobacter-Escherichia* intermediate, N metabolism, 2751
- Aerobiology. (See *Dispersal*.)
- Aerogenes-colon group of bacteria. (See *Colon-aerogenes* group of bacteria.)
- Aerogenes-Escherichia group of bacteria, differentiation, N availability in, 2769
- Aeroionization, negative, effect on blood pressure, 9532
- Aeroplane. (See *Airplane*.)
- Aerosols, sterilization of air and surfaces by, 6216
- Aestivation. (See also *Anabiosis*; *Bud*; *Dormancy*; *Hibernation*.)
- Aethalops* (p.1882²) *aequalis*, 5209
- Aethia* (p.1881⁴), food habits, 9064
- AETHIOPISTREPTUS** (Diplop.) (p.1873²), attenuat., 8749
- Aethochila* (p.1881⁴), n. subspp., 7023
- AFA 641 (Merck), spasmolytic action, 4104
- Afforestation. (See also *Forestry*; *Reforestation*.)
- application of ecology in, 15638
- criteria of choice of species for hill country, Gt. Britain, 4900
- effect on birds and mammals, 161
- in France, 15678, 15681
- on grazed farmlands, 13964
- in New Zealand, 10267
- of peat and upland heath land, Gt. Britain, 4889
- in Sardinia, 13922
- in South Africa, 3025
- in Tripolitania, 15637
- of waste land, in England, 15651
- of water-washed soils, 10245
- African horse sickness. (See under *Horse*.)
- African tick fever. (See *Relapsing fever*.)
- Afrapavo* (p.1881¹), phylogenetic position, 6941
- AFROPLAGIA** (Dipt.) *fasciata*, 6896
- Afrothia* *afrothia*, new tapeworm from, 15987
- AFROVOLA** (Dipt.) *munroi*, 6896
- After-ripening. (See *Dormancy*; *Seed*.)
- Agabus* (p.1876³), tax., 12847
- AGALLINAE** (Homopt.) (p.1875³), 18017
- Agalma* (p.1869²) *elegans*, nematocysts descr., 15984
- Agamiascoris* (p.1870²), n. spp., 14216
- Agamidæ, eye, sclerotic plates, structure, 5879
- Agapetes* (p.1866²), n. spp. and n. comb., 11882
- Agar. (See also *Culture media*.)
- in culture media, conc., effect on bacterial growth, 8259
- starch substitute for, 4721
- degradation and adsorption effects, 4479
- effect on alpha-hemolysin production by staphylococci, 4479
- fractionation, 4479
- introduction into bacteriology, history, 18702
- Agaracina, bioassay, 222
- Agaricaceae (Fungi), p.1862²
- Agaricales (Fungi), p.1862²
- Agaricoid acid, hemolytic action and toxicity, 4112
- Agaricus* (p.1862²), n. sp., 4737
- compestris*. (See also *Mushroom*.)
- Agaristidae (Lepidoptera), p.1877¹
- Agastiscorinus* (p.1871¹) (Ob), n. sp., 10555
- Agathis* *alba*, origin and production, 1282
- as source of resin, 1282
- australis*, as host to other plants, 9017
- Agauria* (p.1866²), monograph, 4790
- Agave* (p.1865⁴), distr., history, and uses, 5271
- in W. Indies and Venezuela, 8429
- americana*, fiber and tracheid development, 10169
- chisosensis*, 13748
- sisalana*, root system, factors affecting, 14393
- Age. (See also *Senescence*.)
- brain potentials and, 16686
- changes in tissues, restricted diet and, 14554, 14555
- difference in growth in infants, Batavia, 4177
- distribution, death rates and, 11695
- effect on:
- acid soluble P in tissues, man, 3659
- arrangement of collagenous fibers in cartilage, 5910
- autonomic ganglia, 4297
- Age (continued)
- effect on (continued)
- bacteriophages, 13571
- basal metabolism, rat, 10964
- blood glucose, cattle, 13036
- blood P, cattle, 1972
- blood pressure, 13192
- bloodvessels of ovary, 13293
- brain cells of mouse, 11388
- carcinogenesis of methylcholanthrene, 14906
- circulation, 2264
- Golgi apparatus in nerve cells of mouse, 7945
- helminthiasis, Venezuela, 10511
- Hb conc. in mice, 249
- hormone in pituitary, rabbit, 9369
- interstitial granular cells of choroid plexus, 5863
- Javanese coal mines, 14758
- kidney function, 11037
- limb bone measurements, guinea pigs, 9673
- osseous tissue, *Gallus*, 5914
- pine needles, chemical changes, 17738
- postural sway in man, 8021
- protein-lipid ratio, 11352
- resistance, to guinea worm, dog, 3248
- to strongylosis, horse, 17890
- survival of offspring, man, 16666
- tensility of aorta, rat, 4076
- total energy metabolism, rat, 10963
- toxicity of morphine and codeine deriv., 1218
- vascularity of palatine tonsil, 5889
- vital capacity, man, 368
- wt. of spleen, 5891
- width of nasal bridge, 11435
- geriatrics, as medical social problem, 8884
- new periodical, 12498
- incidence, of aleuemic leucemia, 13259
- of cancer, Argentina, 13222
- India, 7844
- of coronary artery disease, 4068
- of diabetic retinitis, etiology, 5856
- of hookworm, 5098
- of hypoparathyroidism, 14957
- of liver and lung tumors, mice, 16830
- of pituitary adenomata, rats, 614
- of sarcomata of soft tissues, 16842
- of skin cancers, 13227
- of tuberculosis among workers, 13276
- indicators in quail, feathers as, 14434
- of mother, effect on birth wts., 13190
- plant, of leaves, effect on protein comp., 8539
- of *Dracena* trees, Canary Islands, 2995
- relation to mortality, Batavia, 10016
- to renal pressor substance, 4069
- role in sensitivity to evipan, pig, 7757
- Agelatus* (p.1882⁴) *phoeniceus* *utahensis*, 1641
- Agelastica* (p.1876³) *alni*, embryology, 771
- Agelena* (p.1874³) *naevia*, musculature monograph, 6859
- Agelenidae (Arachnida), p.1874³
- Agelatum* *compositoides*, as host of tobacco leafcurl virus, 17788
- Agglutination(s). (See also *Autoagglutination*; *Blood groups*; *Flocculation*; *Hemagglutination*; etc.; and under specific tests, diseases, and organisms.)
- bacterial, photometric measurement, 842
- lymphopenia and, as measures of immunity, 4257
- reactions, second stage, specificity vs. non-specificity, 9897
- salt optima in, 4495
- specific, mechanism, 2519
- tests, in chronic infections, comparisons, 11653, 11671
- somatic and "X" agglutinins in relation to, 17127
- technic and value, 10005
- Agglutinin(s). (See also *Antibodies*; *Blood groups*; *Hemagglutinins*; *Preceptins*; etc.; especially specific agglutinins, e.g. *Typhoid*, *agglutinin*, etc.)
- bacterial, titers, cod liver oil or bacterial extracts as affecting, 13460
- blowfly larvae filtrates as affecting bacterial disease, 12216
- heterogeneous, for sheep erythrocytes, test for, 859
- production, inhibition by vit. C, 2553
- sheep cell, in glandular fever, Strauss method of demonstration, 13242
- Agglutininogen(s). (See also *Antigen(s)*.)
- Aggregation. (See *Community*; *Crowding*.)
- Agkistrodon* spp., venom of, 13165, 13174
- Aglucone(s). (See also *Glycosides*.)
- cardiac, potency compared to glucosides, 513
- Agouti, exptl. echinococcosis in, 12248
- Agranulocytosis. (See also *Glandular fever*.)
- antistreptococcal serotherapy, 4446
- blood picture and therapy, 14934
- drugs as cause, 2313
- expt'l production with amidopyrine, rabbits, 5832
- monocytic leucemia and, 4253
- sulfanilamide causing, 11598, 11605
- after sulphyridine, 16432
- Agria, notes, 12397
- Agriculture. (See also *Agronomy*; *Crops*; *Horticulture*.)
- based on grassland, as goal in U. S., 10181
- collective, in Russia, 1227
- cry land. (See *Fallowing*.)
- experimentation, advantage of "balanced" over random arrangements, 1817
- correlation between means and standard deviations, 7171
- field plot arrangement, 17566
- intra-class correlation in, 10746
- plot tests, balanced incomplete block vs. lattice square design, 16226
- long-time, preserving in cement frames, 2952
- quasi-factorial arrangement, advantages, 16215
- and incomplete block designs, recovery of inter-block information, 16229
- vs. randomized arrangements, 12562
- systematic vs. randomized arrangements, 1200, 8975, 16218
- use of analysis of variance in adjusting yields for stand irregularities, 5360
- statistical technique for, book, 7172
- technic of variety tests, cereals, 10190
- use of completely orthogonalized Latin square, 5363
- history, culture of cereals, 8475
- land utilization, ecology, 10785
- in Natal, 10186
- new periodical, 14333
- and population trends, U. S. A., 8978
- practice, in northern Rhodesia, 9034
- products, chem., 11947
- relation to botany, course emphasizing, 8880
- to environment, 7174
- to soil conservation and erosion, 5370
- research, in Florida, 2929
- science in, book, 13826
- in Turkey, animal production and, 11489
- in U. S. A., economic and social survey, 16129
- use of growth hormones in, 3064
- Agrius* (p.1876²) *hualpai*, 14245
- Agriolimax* (p.1872³), biology, and breeding habits, 14230
- agrestis*, control, on potato, 12182
- life history, 1609
- Agroclype* (p.1862³), taxonomy, 11825
- Agromyza* (p.1877⁴), n. spp., 12365
- Agromyzidae* (Diptera), p.1877⁴
- Agronomia* *Lusitana*, new periodical, 14333
- Agronomy. (See also *Agriculture*; *Crops*; *Soil science*.)
- book, 2965
- experimentation, arrangement of field plots, 17566
- difficulties in, 1354
- manual, 6497
- extension, aids for, Mich., 11940
- laboratory teaching in, 10201
- new periodical, 14333
- technique, cement frames for, 2952
- randomization of plots in Latin squares, 1200
- variety tests, in cereals, 10190
- Agropyron* (p.1864³), tax., 2835, 10122
- susceptibility to Hessian fly, 17872
- to *Tilletia* spp., 15847
- Triticum* hybrids, fertility in, 14364
- cristatum*, improvement by "strain building", 10732
- standard and fairway strains, identification, 15548
- yields in U. S. S. R., 15563

juncum, geographic races,.....1120
pungens, resistant to Hessian fly, 17872
repens, cutting height and N as affecting, 4830
 root histology of *Althaea* as affected by, 4807
Agrostemma, photoperiodism in, 12080
Agrostis (p.1864²), tax., 1158, 4800
stolonifera, degeneration, attributed to minor element deficiency, 3134
Agrotinae (Lepidoptera), p.1877²
 on crucifers, 5045
Agryriaceae (Fungi), p.1862²
Agryriales (Fungi), p.1862²
Aidaprora (p.1879²) *carteri*, descr., 6974
Ailanthus (p.1866²) *altissima*, leaf position, 6444
Ailuroedus (p.1881²) *melanotus*, habits, modification and distribution, 5185
Ailuropus (p.1883²) *melanoleucus*, of Thibet, 5223
Ailurus (p.1883²) *fulgens*, in Szechwan, 5223
Aimophila (p.1882²), food habits, 9064
Aimsthaea (p.1867²), n. spp., 15505
 Air. (See also Atmosphere; Oxygen; Wind.)
 alveolar. (See under Lung.)
 bacteria in, sampling device for, 10018
 insect succession, 10773
 currents, dispersal of flea hopper, 5029
 drafts, effect on:
 alveolar CO₂ in voluntary apnea, 16581
 respiration, 16578
 voluntary apnea, 16579, 16580
 dust in. (See Dust.)
 filters, testing of commercial, 10010
 fungus spores in, incidence, 6046
 germ content in rooms, 2681
 pollen in, quantitative detn., 6033
 pollution. (See also Dusts; Fumes; Gases; Smoke.)
 sterilization, by aerosols, 6216
 SO₂ content, near New York City, 6617
 ultraviolet sanitation, 11701
 Air bladder. (See Swim bladder.)
 Air conditioning. (See also Humidity; Temperature, effective.)
 apparatus for temp. regulation in green-houses, 5371
 comfort in cooled offices, effective temp. for, 16236
 importance in human ecology, book, 16232
Aira (p.1864²), polyploidy, relation to distribution and growth habits, 1345
 Airplane(s), autogiro, spraying with, for gypsy moth control in woodlands, 14134
 collection, of insects, 10787
 of sugar-beet pollen, 9024
 dispersal of insects by, 9007
 epidemiological significance, 15332
 traps on, insect dispersal, 5029
Aizoaceae (Dicotyledones), p.1865²
Ajaca (p.1881²), food habits, 9064
Akalpita (p.1874²), n. sp., 10588
Akiron, *Rickettsia*, *canis* therapy by, 8218
Alabama (p.1877²) *argillacea*, on cotton, 12198
 toxicity of arsenicals to, 5075
Alaeris (p.1870²), n. spp., from *Cono-*
tophus, 8785
 Alanine, as cleavage product of pantho-
 thenic acid, 17722
 deamination, by *Aspergillus*, 10334
 tonsil extracts and cholic acid as
 affecting, rat kidney, 9192
 metabolism, 16481
 energy production and, 3678
 Alarm reaction. (See also Defense reac-
 tion.)
 effect on absorption of toxic substances
 from digestive tract, 360
 on blood sugar and chlorides, 2332
Alastrum. (See also *Milker's nodules*.)
 in Brazil, 17288
Alaudidae (Aves), p.1881²
ALBERADA (Lep.) (p.1877²), type
Melittara parvata, 8792
 Albinism. (See also Chlorophyll; Color;
 Pigments; Variegation.)
 in *Macrozamia* (cycad), 6379
 mutation in relation to, 17229
 in *Oniscus* (Crust.), 12828
Albizia (p.1865²) *eggelingii*, 1123
 Albicid, in tropical diseases, 17243
Albugo (p.1861²) *occidentalis*, on spinach,
 1369, 15813
 Albumin(s), in blood. (See under Blood,
 proteins.)
 effect on lymphocytes, 11322
 egg. (See also Egg, albumen.)
 denaturation and molecular splitting
 by u.-v., 14462

denatured, monolayers in, 1886
 derivatives, chem. properties, 17189
 duck, antigenic action in duck, hen
 and rabbit, 905
 effect on action of cocaine, 546
 immune precipitate of antisera to,
 precipitin isolation from, 8124
 lysozyme, properties, 10849
 metabolism in cystinuria, 3676
 phenylalanine in, 12802
 precipitin formation and transmission
 to offspring, 8155
 lact- and reduced lact. metabolism in
 cystinuria, 3677
 in milk, variation during lactation, 4414
 serological differentiation of human and
 simian, 8135
 in urine. (See under Urine.)
 Albuminoids. (See specific albuminoids,
 e.g., Collagen, Elastin, Keratin.)
 Albuminose, gelatin-, anaphylactic re-
 sponses to, 9875
Alcaligenes abortus. (See *Brucella a.*)
bronchisepticus. (See *Brucella bronchi-*
septica.)
melitensis. (See *Brucella m.*)
radiobacter. (See *Bacterium r.*)
viscosus, rosy milk due to, 1035
Alcedinidae (Aves), p.1881²
Alcedo (p.1881²) *a. tepida*, bird banding,
 14296
Alces (p.1883²). (See also Elk; Moose.)
 spp., cysticercosis, 5096
Alchemilla (p.1865²) *commutata*, 1140
Alcidae (Aves), p.1881²
 Alcohol, anesthesia, recovery sequence
 after, rat, 9436
 anesthetic action of deuterio- vs. ethyl-,
 5760
 bactericidal action on tubercle bacilli,
 11690
 surface tension and, 979
 in blood and urine, in diabetes and
 nephritis, 9631
 as cause of acute amaurosis, 2387
 consumption, longevity and, man, 433
 depression, drugs affecting, 13178
 detn., 7311
 in blood and urine, 1922, 9117
 disinfection of hands by, mechanism,
 15321
 distr. in organism, 2318
 effect on:
 aggregation of tadpoles in light, 7615
 brain potentials, 2220
 chromosomes of *Isoetes japonica*, 7109
 circulation, 2264
 free volatile acids in blood and
 tissues, 10904
 gastric secretion, 9254
 methemoglobin in aniline poisoning,
 16784
 mitosis of fibrocytes in vitro, 9772
 muscle contraction, frog, 7681
 myotonic muscle, 2312, 11231
 offspring, man, 5351
 resistance to pneumococcal infection,
 rabbits, 625
 temp., heart rate and respiration,
 11253
 tensility of rat's aorta, 4076
 Trichinella larvae, 6744
 from farm products, 13842
 fermentation. (See Fermentation.)
 germicidal value, 10026
 hemolytic action, 13178
 metabolism, liver, insulin and, 12643
 muscular work and, 275, 276
 oxidation, rôle of liver in, 12643
 strength, as influenced by insulin,
 rat, 14477
 by thyroid ingestion, rat, 14478
 readaptation to glucid utilization
 and, rat, 14476
 production by bacillus from *Hibiscus*
sabdariffa, 4697
 by *Saccharomyces ellipsoideus*, 1025
 sensitivity of fibroblastic cells to, 2469
 sugar, bacterial utilization, 2757
 detn., 1939
 fate in body, 10980
 oxidation, culture media for, 11771
 tolerance test, 14833
 use in liver, heart and lung diseases,
 3747
 in trichinosis therapy, 8713
 trihalogenated, hypnotic action of esters,
 509
 utilization, pancreas and liver, as af-
 fecting, dog, 16470
 Alcohol amyl, by yeast fermentation of
 technical leucine, 10062

Alcohol (continued)
 butyl, effect of fumes on chromosomes,
Tradescantia, 1711
 use in pulping wood, 13941
 caprylic, hemolytic action, 13178
 dialkylamino-, alkoxybenzoates, chem.,
 and anesthetic action, 9557
 methyl, in tobacco, 12048
 octyl, effect on leech muscle, 13186
 propyl, disinfection of hands by, mech-
 anism, 15321
 Alcoholism, acute, glucose and insulin
 treatment, 16776
 chronic, hepatic cirrhosis and, 14577
 effect on gastric acidity, 2110
 rôle in infantile rickets, 7817
Alcyonaria (Coelenterata), p.1869²
 Aldarson, in neurosyphilis, 15195
 Aldehyde(s). (See also Acetaldehyde, For-
 maldehyde, and other specific alde-
 hydes.)
 effect on:
 embryo resorption, mouse, 13032
 glucose fermentation by *Aerobacter*,
 11768
 tumor growth, 5801
 heptyl, effect on tumor growth, 9542
 reactivity in presence of amino acids,
 5541
 tuberculin-like, from tubercle bacilli,
 13704
 Alder. (See also *Alnus*.)
 fertilizer requirements on poor soils,
 10262
 Aldrovandi, Ulysses, "Dendrology" (1522-
 1605), descr., 12496
Alectis (p.1880²) *crinitus*, from Massachu-
 setts Bay, 6970
Alectoris (p.1862²), n. spp., 6364
Alectoris chukar, *Hexamita* from, 15964
Aleochara (p.1876²) *algarum*, Diptera pu-
 paria parasitized by, 8776
Alepisaurus (p.1879²) *ferox*, in N. Carolina,
 from Vancouver Island, 3377
 Aleukemia. (See Anemia, aplastic.)
Aleurites cordata, root systems of and soils
 for, U. S. S. R., 1247
fordi, rootknot as affecting growth of,
 15319
trisperma, seedling survival following
 storage, 8548
 Aleuronat, effect on complement activity
 of guinea-pig serum, 17218
Aleutera schoepfii, lymphocystis virus in-
 duced in, 959
ALEUTIASTER (Echin.) (p.1872²)
schefferi, 14224
 Alexin. (See Complement.)
 Aleynodidae (Homoptera), p.1875²
 Alfalfa. (See also *Medicago*.)
 carotene as source of vit. A for poultry,
 15127
 as cattle feed, effect of curing method,
 5997
 crinkle leaf mutation, 5324
 cultivation, ancient and modern meth-
 ods, 4819
 curing and storage, factors affecting,
 1464
 effect on *Bromus inermis*, 11943
 extract, gonadotrophic action, 9306
 as feed, for dairy cattle, 1195
 fertilizers for, 18794
 growth and carbohydrate storage, clip-
 ping tops as affecting, 17701
 growth promoting properties, rat, 16449
 hardness, sugar content and, 15772
 hardness and variety tests, USSR,
 13843
 hay, cut at different growth stages, N
 distr. in, 1183
 effect on protein utilization by lambs,
 5996
 vit. A in, 16507
 heat-induced polyploidy, 5312
 inheritance of flower color, 8938
 leaf meal, vit. A loss from storage, 4426
 leafspot and rootrot due to *Stagonospora*
meliloti, 3109
 nursery technic, Nebraska, 6491
 old vs. young, moist vs. dry, as feed,
 8073
 organic matter in soil after, 2975
 oxidation in vitro, glucose as affecting,
 3687
 protective action against "sweet clover
 disease," rabbits, 17395
 regeneration of roots, from cotyledons,
 15792
 resistance to SO₂ injury, factors affect-
 ing, 6616
 response to time of cutting, varietal
 differences, 13840

Alfalfa (continued)

- rooting of cuttings, hormones as affecting, 10306
- seed production, *Lygus hesperus* as pest in, 15907
- silage, A.I.V. vs. molasses, 17068
- kind and amount of acid required, 5991
- in temporary silos, 6005
- starch reserves in roots, factors affecting, 17597
- structure of plant parts, changes in various silos, 1202
- survival under ice sheets, 12520
- top and root development, cutting as affecting, 17581
- vit. D in, utilization by dairy cow, 17086
- vit. K, in, 16552
- water economy and growth, Nebraska, 120
- yield and comp., rate of seeding, as affecting, 1212
- Alfalfa, wood anatomy, 17527
- Algacites* (p.1860)[†] *clavatoris* (J), 17481
- Algae (p.1860). (See also *Diatom*(s); *Plankton*.)
- Algae, blue-green, N-fixation rôle in rice fields, 11785
- in sewage bacterial beds, enchytraeid worms as affecting, 6217
- communities, of Isle of Man, 121
- on Lunz sandstone of Central Europe, 6387
- economic, of Burma, 8048
- freshwater, of Morocco, 9048
- growth and cell division, growth hormones as affecting, 15705
- growth mats in German lakes, fauna, 12611
- light absorption in natural waters, 1820
- marine, habitat types and seasonal changes, 121
- N compounds in, 6606
- morph., book, 6332
- origin of fresh water Rhodophyceae, 2794
- osmotic value, by plasmolytic vs. cryoscopic methods, 13994
- permeability to electrolytes, kinetics, 15724
- P and N absorption, light as affecting, 15698
- photosynthesis at different depths, 7230
- plasmodesma in blue-greens, 1067
- of ponds of lower Rheinland, 9049
- population density in suspensions, estimation, 6764
- production, method of measuring in large bodies of water, 5397
- protophycean, Nevada (O), 2784
- respiration, glucose as affecting, 14015
- respiration and photosynthesis, H₂S as affecting, 15781
- seaweed, alginic acid in, uses, 3044
- soil, Cu as affecting, 15405
- soil forms, 1066
- text-book, 11809
- thermal spp., 6335
- zonation on estuarine buoys in relation to light intensity, 10799
- zooids, flagellum structure in, 1586
- Alginic acid, in seaweed, uses, 3044
- Alimentary tract. (See *Digestive tract*.)
- Alkali(es). (See especially specific alkalies, e.g. *Ammonium*, *Potassium*, *Sodium*.)
- disease, Se poisoning and, 15092
- effect on chromonema, plant cells, 16155
- on reaction of tadpoles to light, 7615
- salts, effect on microbial activity in soils. (See under *Soils*.)
- soils. (See under *Soils*.)
- therapy in renal rickets, children, 2342
- Alkali reserve. (See also *Acid-base equilibrium*; *Acidosis*; *Alkalosis*; *Ketosis*.)
- acclimatization to low atm. pressures, dog, 7531
- CO₂ tension of water as affecting fish, 370
- toxicity of As and, 7752
- Alkalization, cutaneous, in man, 2548
- Alkaloid(s). (See also under specific alkaloids, e.g. *Strychnine*.)
- of areca nut, effect on intestine, 16810
- of caapi, harmine as, 14796
- cevine, in veratrine, 17666
- cinchona compounds with sulfanilamide, chemotherap. value, 13552
- extraction and detn., 1313
- color reactions with ascorbic acid, 1942
- from *Corydalis* spp., chem., 12037
- coumagine, pharm., 11235

- curare, sources and activity, 8558
- curare-like, 4903
- in *Datura*, organs compared, 6543
- effect on nervous control of intestinal villi, 3760
- in *Erythrina* spp., properties, 4904
- 12020
- in *Fumaria*, chem., 12036
- lobelia, pharm., 4148
- in lupine, chem., 10287, 17665
- in *Mahonia* spp., as factor in resistance to *Phymatotrichum*, 4989
- in opium fumes, 13969
- plant, book, 10340
- protoplasmic micellar surface blockage by, and toxicity to muscular tissue, 10848
- review, 14440
- of *Sanguinaria*, effect on growth of *Phymatotrichum*, 15849
- from *Senecio* and *Erechtites*, chem., 12038
- from *Stimma* leaves, properties, 1320
- of solanaceae, pharm., 16773
- of *Sophora* seed, 10286
- from *Tabernaemontana*, chem., 15693
- from *Vallesia*, chem., 12027
- Alkalosis. (See also *Acid-base equilibrium*; *Alkali reserve*.)
- effect on electrocardiogram, man, 5709
- on lymph formation, 12744
- hypochloremia and, effect on gastric juice, 12897
- during peptic ulcer treatment, 14502
- Alkyl-γ-diethylaminopropylcarbamates, chem. and local anesthetic action, 11257
- Alkyl-dimethyl-benzyl-ammoniumchloride, disinfectant and preservative power, 13572
- 1-Alkyl-2-piperidyl-alcohols, benzoates, as local anesthetics, 11260
- Alkylxanthines, chem. and pharm., 9564
- Allabenchelys* (p.1879)[†], n. sp., 8809
- Allamanda* (p.1866)[†] *grandiflora*, floral abnormalities, 15522
- Allantoin, detn., 212
- in therapy of wounds, etc., 17256
- Allecula* (p.1876)[†] multipunctata, 16031
- Alleculidae* (Coleoptera), p.1876[†]
- Alloleucalytic effect. (See under *Crowding*.)
- Alloleucalytic(s). (See *Genes*.)
- Allene, anesthetic action, 14808
- Allergen(s). (See also *Allergy*; etc.)
- amidopyrine as, 9848
- animal and plant, concurrent action, 2539
- chemistry, 13490
- of cottonseed, nature, 13490
- food, atopic reagins in relation to botanical classification of foods, 13513
- activity, of protein vs. nonprotein fractions of ragweed pollen extract, 13493
- antigen-antibody reactions affecting sympathetic nerves in, 4500
- antigen volume vs. absorption rate, 9828
- in antirabic treatment, 11536
- in atelectasis in children, 17138
- bacterially-induced, 6055
- to bee stings, 15159
- beet pollen and seed dust causing, 6047
- bilharzial bronchial asthma as, 15149
- bronchiectasis rôle, 15165
- in brucellosis, immunol. reactions not correlated, 4486
- causes and prevention, 11541
- to cereal dusts and smuts, 15143, 15144
- cholesterols of serum in, 6028
- clinical, book, 2584
- clinical records, 17157
- by complete antigens of *Brucella* spp., 13469
- concurrent action of animal and plant allergens on, 2539
- coryzal, May fly as cause of seasonal, 6038
- cutaneous reactions, ultraviolet as affecting, 795
- dermatitic, 17187
- in dermatology, review, 15140
- to dermatophytes, in laboratory animals, 6203
- desensitization in, effect on reinfection after BCG-immunization, 8102

Allergy (continued)

- diseases, in childhood, 6038
- diagnosis and therapy, book, 13392
- incidence, 15336
- to drugs, 878
- dust, review, 8160
- effect on iritis, 16907
- in etiology of nasal sinusitis, infection and, 5823
- in exptl. syphilitic keratitis, rabbits, 16896
- food, of digestive system, 3764
- gastroenterol. relations, 2580, 2585
- skin-testing with cooked vs. uncooked, 15150
- fungus, specificity, 6091
- gonococci, 2534
- hetero, in tuberculous rabbits, effect on pneumococcus infections, 623
- heterophile antibody and, 13484
- histaminase in, 795
- histological changes in, 4492
- hypotonia of eye and, 9482
- in infants, 17187
- significance of first signs, 4175
- as influenced by:
- adrenal gland ingestion, 4268
- gelatin-epinephrine mixtures, 14854
- skin extracts, 2539
- Mendelian inheritance and, 11541
- nasal secretions in, cytology, 17187
- in nephritis, 15265
- orthodontic deformity rôle, 17187
- otolaryngology, dermatology and, 15147
- by paraffin-coated tubercle bacilli, 15158
- in passively locally sensitized abdominal organs, 924, 8161
- peptic ulcer and, 14571
- to pine pollen, 15160
- poison ivy sensitivity as, 13483
- in private practice, equipment and personnel, 17157
- prophylaxis, in pregnancy, 11541
- to ragweed, oral and subcut. therapy, 15148
- in rheumatic fever, 15265
- rôle in arthritis, 16902
- in etiology of interstitial nephritis, 2147
- in pulmonary tuberculosis, 13247
- shock, by pollen injections, effect on blood sugar and pressure and leucocyte count, 13509
- to simple chemicals, 4516
- to soybean dust, 6116
- sulfonamide compounds causing, 15188
- symposium on practice, 17157, 17187
- tetanus active immunization, by alum-precipitated toxoid, 6052
- tissue, cellular function in, 4531
- in perfused organs after sensitization, 4521
- tobacco, thromboangiitis obliterans and, 6115
- training specialists in, lay public and, 15147
- trichophytid, 15271
- by tubercle bacilli, x-irradiation as affecting, 6085
- to tuberculin induced in skin testing, 2582
- surgical operation as affecting, 6096
- in tuberculosis, delayed, revaccination and, 17197
- noncaseating, 16897
- susceptibility indicated by, 8102
- tuberculous, without infection, 900
- vit. O relation, 6035
- wheels, contour gage for measuring, 13390
- Alligator, olfactory formations, 9676
- reproductive system, testosterone as affecting, 16983
- Alligator pear. (See *Avocado*.)
- Alligator* (p.1880)[†] *mississippiensis* brain, nuclei of pretectal region, 15012
- Alligatoridae* (Reptilia), p.1880[†]
- Allium* (p.1865)[†]. (See also *Onion*.)
- tax., 1158, 4797B, 6384
- absorption of electrolytes by epidermal cells, factors affecting, 13993
- colchicine and polyploidy, 1698
- growth of roots, hormones and vitamins as affecting, 12063
- relational colling in chromosomes, 1702
- cepa, dynamics of "traction fibers" in mitosis, 10721
- porrum, hemolysins from, 2533
- Alloceadiidae* (Platyhelminthes), p.1869[†]
- Alloceadium* (p.1869)[†] *transversale*, re-discovered, 14210
- Allocoela* (Platyhelminthes), p.1869[†]

- Alloglossidium* (p.1869²) *corti*, in *Helisoma*, 5107
- ALLOLAELAPIDAE** (Arach.) (p.1874²), 12340
- Allolobophora* (p.1871⁴), n. sp., 6810
- caliginosa*, muscular, elements, regeneration, 11469
- Allonychia* (p.1872³) *brevirostris* (O), 3234
- Allopharynx* (p.1870⁴), synonymy, 15990
- Alloplectus* (p.1867²), n. spp., 28274
- Alloteropsis* (p.1864²), n. spp., 15483
- Allotriophagia*, of ruminants, etiology, 17389
- Alnus* (p.1866⁴), structure, 2853
- Allylamines*, toxicity, 18178
- Allyl formate*, effect on muscle, frog, 7698
- Almond(s)*. (See also *Prunus*.)
- nucleotidase from, action on nucleic acid, 12103
- Alnus*. (See also *Alder*.)
- glutinosa*, nitrogen excretion from bacterial nodules negative, 2741
- root nodules, mechanism of formation, 17439
- incana*, *Taphrina robinsoniana* on catkins of, overwintering, 3112
- rhombifolia*, effect on *Lecanium* morph., 3347
- Aloe mitroformis* (p.1865⁴), length of satellite thread, 12503
- Aloinopsis*, lectotypes, 11881
- Alona* (p.1873³), species endemism, 12319A
- Alonella* (p.1873³), species endemism, 12319A
- Alopecurus* (p.1867⁷), polyploidy and geographic-systematic groups, 4774
- Alopias* (p.1879⁴) *vulpes*, from Vancouver Island, 3377
- Alopiidae** (Elasmobranchii), p.1879⁴
- Alouatta palliata*, reproductive cycle, 9415
- Alpha* particle, effect on protoplasm, plants, 15752
- Alphitobius diaperinus*, as interm. host of poultry nematode, 10478
- Alpine**. (See also *Altitude*; *Atmosphere*; *Mountain*.)
- fauna of Austria, 7182
- mussel species, ecology, 1852
- plant, carbohydrate in, daily periodicity, 12084
- ecology book, 10685
- for rock gardens, Ohio, 2977
- regions, limnology, review, 12614
- slopes, distr. of sunlight on, 16235
- vegetation, 3513
- of Morocco, 7218
- of Scandinavia, analysis and review, 5384
- Alsophila* (p.1877⁴) *pometaria*, life hist. and control, 10424, 10425
- Aistromeria* (p.1865⁴), phyllotaxy, 13749
- Altamiranoa* (p.1865⁴), n. combs., 23887
- Alternaria*, causing kernel smudge of cereals, 12124
- spores, incidence in air, 6046
- tolerance for seed disinfectants, 8626
- brassicae*, on cabbage, culture extracts as affecting germination and growth, 12142
- Aithya* (p.1866²) *officinalis*, root histology, 4807
- Altitude**. (See also *Alpine*; *Atmosphere*; *Tree line*.)
- effect on:
- CO tolerance, mice, 2316
- chloral action, 2290
- diuretic action, 4140
- hemoglobin in blood, 3649
- hypoxemic color asthenopia, 9468
- pulmonary vital capacity, 7527
- viable seed content of soil, 16261
- high. (See also *Anoxemia*; *Oxygen tension*, low.)
- Ca in nervous system and, 9157
- effect on erythrocytes and blood pigments, 10940
- reflex-physiological effects, 2244
- sensitivity in mice, 4011
- Altmann's granules. (See *Mitochondria*.)
- Aluminum, balance in children, 9176
- effect on succinate oxidation by cytochrome C, 7267
- in prevention of silicosis, rabbits, 5870
- of soil. (See under *Soil*.)
- toxic symptoms, 11362
- hydroxide, antigenicity of carbohydrate adsorbed on, 922
- scarlatinal toxin adsorbed on, immunization value, 823
- virus of foot-and-mouth disease adsorbed on, 904
- sulphate, in water supply purification, 8293
- Alveolar**. (See *Lung*; *Respiration*.)
- Alydus* (p.1875³) *calcaratus*, meiosis, 5299
- Alyssum* (p.1865⁹), n. sp., 8444
- saxatile*, *Peronospora galligena* on, 12123
- Alytes* (p.1880⁴), coccygeal lymph hearts, innervation, 15014
- Alyxia* (p.1866⁴), n. spp., 15505
- Amaas**. (See *Alastrim*.)
- AMALAFRIDA** (Lep.) (p.1877⁴), type *Cactoblastis leithella*, 8792
- Amandin*, sulphhydryl groups in, 7284
- Amanita muscaria*, extract, effect on bronchi, 5734
- pantherina*, toxicity, variation in, 3041
- phalloides*, pharm. of active principle, 4167
- poisoning, blood chlorides in, 1980
- toxin, lesions induced by toxin of *Aspergillus fumigatus* vs., 9854
- Amarantaceae** (Dicotyledones), p.1865²
- Amarantus reflexus*, nitrate storage, 116
- Amaryllidaceae** (Monocotyledones), p.1865⁴
- Amatidae** (Lepidoptera), p.1877⁴
- Amawornis* (p.1881⁴) *olivacea ruficrissa*, descr. of, New Guinea, 7022
- Ambloplites*, tagging expts., 159
- rupestris*, diurnal activity, 14419
- shelters in Michigan lakes, 9060
- Amblycheila* (p.1876⁴), collection data, 17991
- Amblyceratus* (p.1875³), n. sp., 8785
- Amblyomma* (p.1874³), n. sp. and keys, 6854
- cajennense*, typhus vaccine prepared from, 13583
- as vector of exanthematic typhus, 13583
- hebraeum*, as vector of tick-bite fever, 8203
- maculatum*, *Rickettsia* from, tissue culture, 4582
- sores caused by, attracting screw-worm, 5063
- Amblyopia*, due to alcohol and tobacco, thiamin chloride therapy, 16516
- Amblypoda** (Mammalia), p.1883³
- Amblystegiaceae** (Bryophyta), p.1863⁴
- Amboceptor**. (See *Antibody*; *Complement*; *Immune body*; *Immunity*; *Sero-diagnosis*; etc.)
- Ambonychiidae** (Mollusca), p.1872³
- Ambrosia** (p.1864⁴). (See also *Ragweed*.)
- of Italy, 13762
- pollens of spp. antigenic relationships, by Dale test, 15142
- Ambystoma** (p.1880⁴). (See also *Axolotl*.)
- anus formation in, 4391
- brain structure in early feeding stages, 679
- cranial muscles, morphogenesis, 755
- eyeball and lens, size regulation, 11448
- gonads, heteroplastic gonad transplants, growth, 13333
- heart, initiation of beat and contraction rates, 5946
- heteroplastic transplantation of pituitary between species, 9281
- larvae, thalamus and midbrain, anatomy, 4327
- larval epidermis mitotic rate, 2472
- limb development in relation to temp., 744
- lymphatics and associated blood-vessels, development, 9686
- muscle, number of fibers per sq. mm., 666
- nerve regeneration in, 658
- neural crest, development, 17035
- organizers, chemical nature, 8040
- origin of sheath cells of Schwann, 13324
- parabiosis, compatibility, 11451
- respiratory exchange during development, 4378
- sex differentiation, testosterone injections as affecting, 4336
- tails and eye grafts, regeneration during starvation, 11373
- mexicanum* melanin pattern, physiologic detn., 5652
- punctatum*, chromosome structure, 5296
- development after treatment with lithium, 743
- ear ectoderm, differentiation, 4393
- eggs, capsular fluid, 12643
- reversal in transplanted limbs, 11454
- tigrinum*, brain vascularity, 11387
- cerebrum, structure, 7949
- chromosome number, 1720
- food intake as affected by growth-promoting extracts, 3838
- growth as affected by ant.-pituitary extract, 3806
- pronephric duct, development, 2444
- sex reversal induced by testis transplants, 749
- Ambystomidae** (Amphibia), p.1880⁴
- Ameba**. (See *Amoeba*.)
- Ameiurus*, biology, 10814
- tagging expts., 159
- melas*, identity of cysticeroid parasite, 17943
- Ameiva* (p.1880⁴) *surinamensis* Jacobson's organ, form and function, 15000
- Amelanchier* (p.1865⁴), n. f., 6881
- almifolia*, *Taphrina* on, 6851
- Amenorrhea**. (See under *Menstruation*.)
- Amelia pyramidata*, new cercaria from, 8298
- American Society for Pharmacology and Experimental Therapeutics**, proceedings, 1939 meeting, 18178
- Amides**, acid-, bacterial decomp., 13713
- N*-isobutyl of aliphatic acids, toxicity in sprays, 5869
- synthesis, in plants, 14022
- Amidopyrine**, effect on photochemical reduction of oxidation-reduction indicators, 16331
- Amine(s)**, aliphatic, gastric ulcer produced by, 12894
- phenyl substituted, effect on central nervous system, 532
- aliphatic and aromatic, configurative relationships, 15694
- antispasmodic action, 9538
- cephalotropic, effect on the psyche, man, 14819, 14820, 14866
- elimination by man, 293
- ethylene, toxicity, 2421
- methoxyphenylisopropyl-, pharm., 11226
- oxidation, pyrrole as affecting, 206
- related to ephedrine, effect on smooth muscle, 7789
- sympathomimetic, action in heart-lung prep., 2292
- effect on:
- blood pressure, cat., 11212
- in phenol shock, 11259
- central heat production, 11221
- heart in anesthesia, 12643
- smooth muscle, 11216
- Amino acid(s)**. (See also *Nitrogen*; *Proteins*; *Proteolysis*; and under specific amino acids, e.g., *Cysteine*.)
- absorption spectra, infra-red., 1943
- adsorption on colloids, 12720
- in bacterial cultures, effect on hormone production, 13981
- in bacterial nutrition, interrelationships, 15414
- basic, in liver, pig., 12800
- in blood. (See under *Blood*.)
- in ceum, mammals, 12913
- chem., review, 14440
- conc. in heart in cardiac failure, 13117
- containing isotopic N, synthesis, 7424
- creatinine production by bacteria from, 6305
- deamination, reversible action of oxidized phenols in, 2023
- degradation products, effect on yeast growth and fermentation, 6271
- in depocasein, 10975
- detn., 7290
- in blood and urine, 10571
- book, 1913
- with naphthalene- β -sulphonic acid, 16334
- effect on:
- anemia due to deaminized casein, rat, 9160
- blood protein production, 9155
- creatinine-creatinine excretion, rat, 13007
- creatinine metabolism, rat, 16476
- glucose utilization, hypophysectomized and insulin-treated rabbits, 2026
- nicotine formation, in tobacco leaves, 17721
- spore germination, 15737
- tissue glycolysis, 7413
- in eukerats, 7977
- formation from ammonia in animals, 7417
- formation and breakdown through intermolecular transfer of amino group, 9089, 9092
- gastric peristalsis inhibited by, 12643

- Amino acid (*continued*)
 injections, effect on liver cells, cytology, 2448
 and N retention, time factor, 10974
 interaction with sugar, time factor, 7418
 isomers, effect on epinephrine action, 7771
 on growth, 5537
 oxidation as influenced by microbial dissociation, 6324
 by pyrrole, liver suspension, 206
 in keratins, 5447
 in lung tissue, cattle, 12801
 in marine algae, 6606
 metabolism, energy production and, 3678
 in inanition, 12643
 liver function and, 3757, 12890
 on low protein diet, 12808, 14531
 of N-methylated, rat, 5536
 review, 14440
 yeast, 8588
 nitrated, serological reactions, 9876
 N analyses by nitrous acid method, rôle of I₂ in, 1917
 N fraction in, detn. in plants, 13099
 N isotopes in, 7423
 N-methylated, availability of α-N-methyl-tryptophane, 12804, 12806
 in *Oblidia*, 2022
 oxidation, by staphylococci, dissociation and, 6324
 thyroid as affecting, 11060
 in plant proteins, distr., 6608
 in posthemolytic red cell residue, 7330
 in post. pituitary extracts, 9374
 in rabbit myosin, 16483
 racemization on acetylation with ketene, 291
 solubility in acetic and butyric acids, 5491
 solutions, chlorides in, detn. of activities, 14483
 as source of glycogen, fasting rats, 5545
 S containing, replaceability of L-cystine by, rat, 16477
 utilization for growth, 16482
 synthesis with ethyl benzamidomalonate, 14484
 into proteins, water as affecting, 8590
 review, 292
 thio-, in *Pagurus* spermatophores, 12778
 in urine. (See under *Urine*.)
 utilization, by *Clostridium botulinum*, by marine bacteria, 13707
 Amino groups, amphylactic shock by, 9875
 chemotherapeutic value of nitro-groups vs., 13545
 Aminocarbazoles, depressant and analgetic action, 7758
 Amino esters, local anesthetic action, 515
 Aminoethane, methoxyphenoxymethanol, effect on uterus, 5742
 phenoxymethyl, effect on uterus, 5742
 Aminoethoxy-2-diphenyl, diethyl, pharm., 13142
 Aminophenanthrene, carcinogenic activity, mice, 13207
 Aminopropane, phenyl-, pharm., 16764
 Aminopyrine, as cause of agranulocytosis, rabbits, 5832
 of neutropenia, 2313
 of porphyrinuria, rat, 16444
 effect on:
 blood elements, 4146
 bone marrow, neutropenia and, 16759
 oxidation of phospholipids, 14785
 sensitization of guinea pigs by, 9843
 therapeutic index, 14793
 Ammonia. (See also *Ammonification*; *Ammonium*; *Nitrification*; *Nitrogen*.)
 in blood. (See under *Blood*.)
 in blood and urine, review, 7245
 in blowfly larvae, 10441
 detn. in blood, 10867
 in milk, 2496
 in urine, 12763
 effect on chromosomes, *Tradescantia*, 1706, 7108
 oxidation by nitrite bacteria, mechanism, 8348
 production, by *Azotobacter*, auxin as affecting, 4702
 bacterial, electrical conductivity and, 2745
 from nitrates by *Clostridium welchii*, in soil. (See under *Soil*.)
 in urine. (See under *Urine*.)
 utilization for amino acid and creatine formation in animals, 7417
 Ammonification, of dicyanodiamide and derivatives in soils, 17430
 in muck soils, mineral elements as affecting, 11787
 in soils, curves of nitrification vs., 8347
 sunlight vs. microorganisms as affecting, 17436
 Ammonites, catalogue of Liassic in Brit. Museum, 8742
 Ammonium. (See also *Ammonia*; *Nitrogen*.)
 chloride, effect on tissue glycolysis, 7413
 expectorant action, 5758
 hemolysis by, 10937
 molybdate, as mordant, for Mann's stain, 10089
 for Weigert-Pal stain, 10089
 salts, absorption by plants, humic compounds as affecting, 17620
 effect on blood ammonia and urea, 16351
 on ischemic pain, 14749
 sulphate, effect on wilting coefficient of rice soil, 17589
 as mosquito larvicide, 12211
 in soil, NH₃ evolution in winter from, 10071
 sulphide, in viscose rayon mfg., toxicity, 7919
 tetramethyl-, compounds, circulatory effects, 5745
 Ammonoidea (Mollusca), p.18724
Amphiporus insularis, as interm. host of poultry nematode, 10478
 Amnion. (See *Fetal membranes*.)
 Amoeba. (See also genus *Amoeba*, and other genera; *Amoebiasis*.)
 culture method, 12279
 dysenteric, incidence in Philadelphia, 8682
 electric charge of protoplasm, 7252
 in exptl. enteritis, turkey poult, 6785
 fate of crystals in, 6760
 of soil, fungi preying on, 6341
 in symbiotic method for culture of acid-fast bacteria, 8258
Amoeba (p.18689). (See also preceding head (*Amoeba*); *Amoebiasis*.)
pellucida (*Dactylophagium*), 3255
proteus, cytology of, as affected by centrifugation, 1730
 digestion of fat, 8721
 fat release after irradiation, 1902
 intracellular oil, interfacial tension, 10839
 nuclear and cellular division, 3266
 response to alternating current and to light, 7605
Amoebae (Protozoa), p.18682
Amoebiasis. (See also *Dysentery*, *amebic*, and organisms producing amoebiasis, e.g., *Endamoeba histolytica*.)
 carrier problem and prevention, 12272
 cysts from man in rat, mechanism, 8712
 discussion, 15945
 in dog, exptl. studies, 6757
 of penis, 10509
 relation to non-tropical sprue, 13271
 spread by food handlers, 15335
 in stomach, dog, cat, 10495
Amoebida (Protozoa), p.18682
Amoebidae (Protozoa), p.18682
Amoebocytes. (See *Blood*, *cells*.)
Amoreusia (p.18652), n. Peruvian sp., 15506
Ampelocissus (p.18662), n. spp., 15483
 fossil seeds, 2783
Amphelictogon (p.18732), n. sp., 5124
 Amphetamine. (See *Benzedrine*.)
 Amphibia (p.18809). (See also *Frog*; *Salamander*; etc.; and under genera, e.g., *Rana*.)
 of Balkans, 6976
 book, 8875
 carbohydrate metabolism, 16489
 central nervous system, melanin pigment in, 7944
 changes in mandibular arch during metamorphosis, 664
 of England, popular ecology, 10683
 erythrocyte size, 667
 flukes, chapter, 10498
 inner ear, sensory areas, comp. anatomy, 11822
 kidney, glomerular tuft, cyst formation in, 11460
 larvae, pallor production by tyrosinase inhibition, 1891
 lymph hearts, study, 16735
 merogonic hybrids, development, 9768
 muscles, number of fibers per sq. mm., 666
 oocyte nucleus, physiology and morph., 14349
 origin, 5163
 pancreas, entero-chromaffine cells in, 4337
Saprolegnia parasitica host range in, 11755
 skin, growth of transplants, 11450
 specificity of gonadotrophins in, 11051
 structure of Golgi apparatus in tissues, 8919
 tadpole, growth, heparin and chondroitin sulphuric acid as affecting, 7462
 lateral-line organs, colored granules in, 8003
 metamorphosis, thyroxin-cortin synergy on, 377
 reaction to light, chemicals as affecting, 7615
 of Tennessee, 6975
 thyroxin and adrenalin as affecting, 2301
 Amphidiploidy. (See under *Polyploidy*.)
Amphiphium (p.18672), n. spp., 2828A
Amphimerus (p.18704) *elongatus*, in ducks, Michigan, 1591
Antoni, from loon, 17931
Amphineura (Mollusca), p.18724
 Amphionomidae (Annelida), p.18711
Amphiorhiza (p.18704), syn., 6788
Amphiox (*Leptocardii*), p.18781
Amphioxus (p.18783), development of gill pouches and nephridia in, 9761
 Amphipoda (Crustacea), p.18744
 as intermediate host of duck nematode, 3246
 of poultry cestode, 10477
 AMPHIPORELLA (Nemert.) (p.18704), n. sp., 12303
Amphiporus (p.18704), n. spp., 12303
 Amphisbaenidae (Reptilia), p.18802
Amphisphaeria (p.18612), n. sp., 15453
Amphitrema (p.18683), Lapland, spp., 10526
Amphiuma tridactylum, helminths, 6716
 Amphiuroidae (Echinodermata), p.18721
Amphiphora (p.18754), n. spp., 16089
 rubi, susceptibility and resistance, red raspberry, 8637
rubicumderlandi, as vector of *Rubus* mosaic, 17780
Ampullina (p.18729), relation to *Trajanella*, 16008
 Amyl nitrite, effect on bronchi, 2250
 on thiobarbiturate action on heart, 525
 Amyloid, in plasma cell granuloma of breast, 11296
 Amyloidosis, primary, systemic, path., 9612
 in pulmonary tuberculosis, 13244
 renal, clin. path., 7859
 Amylose. (See *Starch*.)
 Amylase, isomeric, toxicity and hypnotic action, 9550
 Amytal. (See also *Barbituric acid*.)
 effect on cyclopropane anesthesia, 7797
 on lactic acid in brain, 5788
 Na, anesthetic in digitalis assay, cat, 523
 toxicity, 11258
Anabaena (p.18600), n. spp., 6968, 8385
 10104, 15437
 Anabantidae (Pisces), p.18794
 Anabiosis. (See also *Aestivation*; *Dormancy*; *Hibernation*.)
 seasonal response of fish to low temps. and, 16232
 Anabolism, in yeast, effect on respiration, 15760
Anabrus simplex, control of, Na arsenite, 17888
Anacamptodon (p.18634) *fortunei*, syn., 11845
 ANACAMPTOTHRIX (p.18611), n. gen., 2766
 intestinales, from intestines of fish, 1057, 2766
 Anacanthini (Pisces), p.18794
Anacanthocheilus, larvae, on marine fish, 10496
 Anacardiaceae (Dicotyledones), p.18664
Anacardium (p.18723), n. sp., 6828
 cane and other plants, life hist., 5037
Anacorus (p.18814), n. spp. in, 5197
Anadara (p.18723), n. sp., 6828
 Anaemia. (See *Anemia*.)
 Anaerobe(s). (See *Anaerobiosis*; *Bacteria*, *anaerobic*; *Fermentation*; etc.)

Anaerobiosis. (See also *Bacteria*, *anaerobic*; *Fermentation*; *Metabolism (tissue and cellular)*; *Oxidation*; *Oxygen lack*; *Oxygen tension*, low; and *under Respiration (plant)*.)
effect on life of *Opisthorchis* in vitro. 8688
oxygen indicator in "ring plates" for. 8272

Anaesthesia. (See *Anesthesia*.)
Anaesthetics. (See *Anesthetics*.)
Anagallis (p.1866⁴) *arvensis*, color variations. 13759
Analeptic(s), action of pervitin. 7767
effect on:
activity of narcotics. 16765
barbiturate depression, rabbit. 13188
metabolism in nerve cells. 4138
pressor action. 4171
review. 508

Analgesic(s). (See also specific analgesics, e.g., *Opium*, *Salicylates*.)
action, analysis. 12643
of carbazole derivatives. 7758, 7759
of opium alkaloids and antipyretics. 9537
quantitative measurement. 4129, 9537
coal-tar, effect on diaphragm and respiratory center. 7779
porphyria due to, rat. 16444

Analysis. (See *Chemistry*; and *under Blood*; *Milk*; *Urine*; *Water*; etc.)
Anaphes (p.1878²) *anomocerus*, egg parasite of cotton flea hopper. 12230
Anaphylactic shock. (See also *Anaphylaxis*; *Shock*; etc.)
due to *Ascaris* extract, guinea pig. 14177
effect on blood histamine, 14493, 14499
on complement. 4433
by gelatin-tryptone, albuminose and peptone. 9875
histamine release in, detection and time relations in various tissues. 9887
histamine therapy, guinea pig. 12643
as influenced by:
hypophysectomy. 17181
skin extracts. 2539
thyroidectomy. 818
vit. C. 6038, 13465, 13515
mechanism. 4472, 13459
relation to acetylcholine. 9885
resistance of white rats to. 9896
sympathetic nervous system in. 4472

Anaphylaxis. (See also *Anaphylactic shock*; *Allergy*; *Asthma*; *Desensitization*; *Sensitization*; *Shock*; *Serum sickness*; etc.)
by chemically defined substances. 8110
clinical, book. 2584
cotton lintens inducing. 9837
effect on coronary arteries. 7702
histamine rôle in. 4448, 11562
horse serum and egg-white as antigens, rhesus monkey. 6062
house dust inducing. 9837
inverse, diagnostic applications. 4526
local, endogenous, hydrolyzed autoserum inducing. 13435
in gastro-intestinal tract. 9862
pulmonary, autogenous urine inducing. 13435
path. and mechanism, and comparisons. 17182
pregnancy as affecting, rat. 7601
respiratory, exptl. 17191
rôle in tumor reaction to bacterial carbohydrates, rats. 4196
spartein as affecting. 8099
vit. C rôle in. 13464, 13465

Anaplasma (p.1869²). (See also *Anaplasmosis*.)
calf infected by. 2708
in pigs. 12246
marginalis, in buffaloes. 14175

Anaplasmosis. (See also *Anaplasma*.)
in Rhodesia. 2717
Anaptychia (p.1862²) *leucomelaena*, parasitism as affecting sterility in. 13740
in upper Rhine valleys. 1092
var. *circinalis*, morph. 13740

Anapus testudo, adaptations of mouth parts for feeding. 1853

Anarhynchus (p.1881³) *frontalis*, origin and life history. 5192

Anas. (See also *Duck*.)
p. *platyrhynchos*, trematodes in, 74 spp. 1591
rubripes, trematode parasites, Canada. 1590

Anasa tristis, control of. 8641

Anaspides tasmaniae, host of *Coitocaecum*. 17937

Anastatus semiflavus, parasite of *Hemileuca*. 5141

Anastrepha (p.1877⁴), species transferred to *Lucumaphila*. 18009

Anathyrus (p.1871³), n. sp. (D). 16001

Anatidae, notes on. 8844

Anatiformes, moult in. 14801, 14802

Anatis ocellata, predator on *Lygaenematus*. 5051

Anatomy (animal). (For plant material, see under *Plant*.)
chordate, book. 13290
contributions of T. Wingate Todd. 15056
of fetal pig, book. 4313
functional and topographical, book. 13289
history. 7078
of horse, book. 15002
human manual for dissection. 16957
origin of structure and form, book. 11380
principles. 9677
morbid, of domestic animals, book. 8818
of nervous system, book. 15016
guide for sound picture. 15010
physiology and, textbook. 16292
plastic. 663
postures and movements of workers. 14991
of rabbit, book. 659
regional, fossa ovalis and related blood-vessels. 669
of inferior and superior lumbar space, Amer. whites and negroes. 8010
of shark, *Necturus* and cat, guide book. 16954A
terms, origin and pronunciation. 10692
vertebrate, laboratory directions. 662

Anatoxin. (See *Antibodies*; *Antitoxins*; *Immunity*; *Toxins*; and specific anatoxins, e.g., *Tetanus*.)

Anavenin(s). (See *Antivenin*; *Venoms*.)

Anchastus (p.1876²), n. spp. 6883, 8766

Anchitana agilis, seasonal occurrence of. Plymouth. 1850

Anctirodon, "decay of jaws" and "snake pox" in. 1010

Anctomys monax, physiology. 3543

Ancylys (p.1877²) *comptaena*, insect parasites and biol. control. 1523

Ancylostoma. (See also *Hookworm*; *Necator*.)
in natives, Nigeria. 8690
caninum, immunization by subcutaneous injection of larvae. 4548
incidence in dogs, Surinam. 15956

Ancylostomatidae (Nematoda), p.1870²

Ancylostomiasis. (See *Ancylostoma*; *Hookworm*; *Necator*.)

Androecium. (See also *Flower*; *Sporophyll*; *Stamen*.)

Androgen(s). (See also *Testes*.)
absorption spectra of compounds formed in m-dinitrobenzene reaction. 12967
action, of adrenals, castrate ♂ rat. 7537
of antipituitary-like hormone. 9812
of progesterone. 9811
of sterone glucuronides. 11251
androsterone, capon comb response to direct application, factors affecting. 12643
dehydro-, addition of side chains. 3870
dose-response curve for comb inunction. 12958
effect on:
development of Mullerian ducts, chicks. 17048
estrone action. 5793
head furnishings of pullets. 11416
excretion, u.v. as affecting. 16318
in urine, detn. by colorimetric method. 3875
assay. 8860
comb growth method. 7540
inunction vs. injection. 12992
values with the m-dinitrobenzene reaction. 14637
use of toad larvae in. 9297
from brewer's yeast, effect on accessory sexual structures in hypophysectomized rats. 7966
capon comb response to direct application, light as affecting. 12643
chemistry. 3869, 3870
and properties. 9291
color reaction with furfural and H₂SO₄. 16383

Androgen (continued)
in corpus luteum extracts. 14686
correlation between treatment and degree of masculinization of ♀ rats. 12643
differential sensitivity to, hens. 2155
effect on:
comb and behavior of cockerels. 5612
comb of fowl, estrogens and. 9351
differentiation of transplanted halves of embryonic genital primordia, mice. 12643
endocrine glands of ♂ guinea pigs. 3793
females. 5551
genitalia of ♂ and ♀. 5620
gynecomastia. 9634
hair color, castrate men. 12643
longevity of sperm, fowl. 3970
mammary growth, ♀ mice. 12996
motility of ♂ accessory genital organs. 16622, 16623
ocular transplant of seminal vesicle, rabbit. 3868
prostate and seminal vesicles of monkeys. 16991
sex characters in mice. 5673
sex development, opossum. 9349
tanning of skin, man. 383
of women. 7542
thymus and development, rat. 16597
effects, review. 14644
epi-allo-pregnanolon, effect on comb and vesicular gland. 16594
estrogen ratio in adreno-genital syndrome. 651
extraction, from blood and urine, man. 3860
of women. 16595
keto, differentiation. 12643
oral admin. to capons. 7545
oxidation by yeast. 5637, 5638
pregnenolone, activity, route of adm. and. 9320
effect on pregnancy after castration, rabbit. 12944
masculinizing effect on rats and chickens. 14612
production, effect on testicular function and structure in hyperthyroid rats. 7971
by ovary, rat. 12934
rôle in heavy feathering of fowl. 2167
series, comparative effects on ovarietomized mouse. 3817
conversion to estrogens, dog. 3848
effect on ♀ rats. 11062
on growth of iris epithelial cultures. 3854
effect of temp. on comb response. 3830, 3831
increased comb-growth effect in blood after testicle-perfusion with. 3809
stability. 9341
in testis extract, enzymic reduction. 5618, 5619
testosterone, action as influenced by vehicle, chicks. 14628
androsterone and aetiocolan-3-ol-17-one as transformation products, man. 11049
chemistry. 3902, 3903, 3904
3905, 3906, 3907
clinical uses. 14979
derivative, progesterone-like action. 3844
detn. of maintenance dosage for comb growth. 12938
effect on:
abnormal uterine bleeding in human. 3824
adrenalectomized ferrets. 5623
"antimale effect" of oestrone. 11053
behavior of ♀ canary. 14697
breast carcinoma, mice. 9590
castrate prostate. 3795
castrate rats. 5630
cellular metabolism. 12962
copulatory activity, rat. 9376
corpus luteum. 11069
creatine metabolism. 9355
cryptorchidism. 5861
dysfunctional uterine bleeding. 14970, 14971
endometrium and uterine bleeding, monkey. 16605
estrogenic paradoxical effects, mice. 4281
estrone action. 5798
eunuchoidism. 14964
excretion of urinary androgens. 14968

Androgen (continued)

- testosterone (continued)
effect on (continued)
fallopian tube peristalsis, human, 12953
fat metabolism, 2000
female rats, 9346
genital tract of ♀ rat, 9309
of immature ♀ rat, 12979
genitalia in *Ambystoma*, 4336
glycogen in cells of vaginal smear, man, 2125
gonads and gonadotropic hormone secretions in ♂ rats, 7964
impotent ♂ rats, 396
lactation, human, 13041
mammary gland, monkey, 11100
menopause, 9648
menstrual cycle, woman, 9354
mouse ovary and pituitary, 8881
muscular activity, rat, 3792
ovarian activity, guinea pig, 7963
oviduct, *Bufo*, 7963
ovulation and luteinization, rabbit, 12954
parturition, man, 3971
phosphatase in prostate, monkey, 12957
pituitary of ♀, 2121
pituitary gonadotropic function, 12643
pituitary and mammary gland, rat, 3890
prostatic adenoma, 14969
prostatic enlargement, man, 16631
reproductive system of immature alligators, 16983
resistance to toxic substances, 12929
sensitivity of uterus to pituitrin, 9340
sex differentiation of genetic ♀ mice, 16989
in opossum, 11407, 11408
singing in canaries, 12968
sperm production, man, 9317
survival of adrenalectomized rats, 13049
testes, hypophysectomized rats, 5621
thymic involution, rat, 3802
thymus wt., rat, 9333
uterus, guinea pig, 3884
vaginal opening, rat, 3889
vigor in senile rats, 16613
water intoxication in adrenalectomized rats, 380
X-zone in adrenal, 3916, 9381
estrogenic action, castrate mouse, 16620
ethinyl, effect on uterine bleeding, 7902
implantation in capons, effect on comb, 3816
induction of premature puberty with boy, 384
methyl, methyl-androstendiol and, chem., 12976
in an ointment, effect on growth of penis, 382
percutaneous admin., 9391
progestational activity of ethinyl and vinyl, 9363, 9364
in treatment of acne vulgaris, 3872
8-trans, 17-dioxo-etiocolonic acid prepared from trans-dehydro-androstosterone, 16629
in urine, in advanced pregnancy, human, 11057
children, 9404
daily excretion, 13010
human ♂ castrates, 11058
after inj. of testosterone, 9401, 16602
man, 3814
sources, 9286
thyroid feeding as affecting, rabbit, 12973
Androniscus (p.1873), n. spp., 10574
eye structure of blind spp., 5126
Andropogon (p.1864), (See also *Sorghum*), n. spp., 2328
beetles on, hibernating, 17866
chemical analysis after severe clipping, 7189
forage production, clipping as affecting, quadrat study, 12601
sorghum, crop analysis and varietal improvement, 73
smut (*Sphacelotheca oryzae*), 3113
Anemia. (See *Anemia*.)
Anemia. (See also *Ischemia*.)
acetyl-choline as affecting, 11326
in achlorhydria, blood vit. B₁₂ in, 4261
etiology, 5829

Anemia (continued)

- alimentary, vit. A deficiency and, 4250
aplastic, gold causing, 9622
significance of small lymphocytes, 5835
aplastic hyperchromic, in benzol poisoning, 11323
in arsenic and quinine therapy, 13254
bilirubin and Hb relation, dogs, 11315
blood compensatory changes in, mechanism, 2389
blood oxalic acid in, 11327
cholesterol causing, guinea pigs, 13263
in chronic infections, mechanism, 14935
circulatory disturbances in, 2400
Cu and Fe deficiency in, dogs, 3704
decreased plasma-Fe, 16911
discussion, 7403
effect on cardiac size, children, 16823
electrocardiography in induced anoxemia, 4083
-endocrine syndrome, ♀ path., 9656
equine infectious, blood cholesterol in, 8329
blood data in, 11740
Borna disease compared, 4605
Botelho's test for, 8319
formol-gel reaction, 11316
infection routes, 2703
value of guinea pig diagnosis, 2716
erythroblastic, transmission, 14923
erythrocytes in, anions and cations in, 7250
elliptical, 1965
fragility, 632
in erythromyelosis, 5827
estradiolbenzoate causing, dog, 3922
estrogens causing, 2170
exptl. liver extracts in, 4149
in gastric cancer, etiology, 11308
vs. gastrointestinal disease, 16915
heart murmur in, 4094
Hb production and protein intake in, 4247
hemolytic, anti-hemolytic factor in plasma, 639, 640
congenital, with normal red blood cell fragility, 2349
hemolysins causing, 633
hemolysis, regeneration, and erythroblastosis, 638
review and classification, 9618
in hemolytic jaundice, 7879
hemorrhagic, bacterial toxina as affecting, rabbits, 5842
blood Cu in thyroidectomized animals in, 12825
nephritis and Hb formation and, dogs, 7889
reticulocyte response, 647
valine and isovaleric acid as affecting, 13264
in hereditary hemolytic jaundice, 4246
hookworm, avitaminosis B₁₂ and, 16925
hyperchromic, exptl., in rats, 16916
hypochromic, blood coagulability in, 11309
Co therapy, 7872
hereditary symptoms, 13258
idiopathic, familial occurrence, 2396
renewed HCl secretion by Fe therapy, 634
of laborers on tea estates, 11320
lethal, genetics and physiology, rat, 12557
in leucemia, response to liver, 11310
leuco-erythroblastic, myelocytosis and, 7888
macrocytic, hemolytic, blood studies, 11334
in intestinal strictures, vs. pernicious anemia, 7871
of pregnancy, relation to fetal metabolism, 11335
protein diet during pregnancy and, man, 14676
in sprue, 11346
tropical, red cell fragility and, 7878
in malaria, 13257
reticulocytes and, 8685
types, 14931
microcytic hypochromic, vit. B₁₂ and, dogs, 4245
in nephritis, etiology and therapy, 11319
nutritional, amino acids as affecting, rat, 9160
cobalt deficiency in livestock, 17385
ferrous vs. ferric Fe for, rat, 9178
in infants, etiology, 7818
therapy, 13194
iron and As therapy, 4256
radioactive Fe metabolism in, dog, 10991

Anemia (continued)

- in obstructive jaundice, 16913
orthochromic, in paroxysmal hemoglobinuria, 636
pernicious, achylia gastrica as affecting vit. C absorption in, 2388
anti-anemic factor, destroyed by *Bothriocephalus latus*, 2390
effect on hematopoiesis, chick embryos, 646
in fetal bovine livers, 11385
argentaffine cells, significance, 14930
blood phosphatides and cerebroside in, 2394
liver therapy as affecting, 641
blood vol. changes, liver therapy and, 13253
cardiac abnormalities in, 2400
choline and, 4248
exogenous, case, 11307
gastroscopic study, 7882
as influenced by:
charcoal adsorbate of liver extract, 648
gastric juice, 9616
oral urinary reticulo-cytogenic principle, 12643
pellagrous liver, 11348
yeast, 5843
intestinal worms as affecting liver extract action, 14925
intrinsic factor, hist. of pyloric gland organ and, 2397
leucocyte changes, 7886
pathogenesis, rôle of *Bothriocephalus latus* in, 2399
pellagra and, 4259
phlegmonous gastritis and, 4240
platelet count, 14932
retractility of blood clot in, 11309
secretory depressant in gastric juice in, 13252
serum lysocithin and, 5826
standards for max. reticulocyte percentage, 637
statistical review, Norway, 635
Sweden, 4252
therapy at long intervals, 14928
yeast vs. ventriculin and liver extract in, 9615
pernicious and post-hemorrhagic, blood regeneration, 7883
phenothiazine causing, 7756
post-malarial, effect of Cu and Fe, in parietics, 5838
in pregnancy, blood findings in, Indian coolie women, 644
iron therapy as affecting, 4256
pseudomongoloid face and mongoloid eyes in, 5931
of pulmonary tuberculosis, Fe and, 7875
rat. (See *Bartonella*.)
relation to stomach, 11318
sickle cell, cerebral vascular disease and, 13250
sedimentation rate, 16912
in western deer, 5881
of sprue, non-tropical, characteristics, 14938
sulfanilamide inducing, 2401, 15202
typhoid, response to liver extract, rabbits, 5828
from ultra-filtrates of uremic serum, study, 11321
in worm infestations, pathogenesis, 2335
types, 14933
Anergy. (See also *Allergy*.)
tuberculin, in pulmonary calcification cases, 11528
Anesthesia. (See also *Anesthetics*; *Narcosis*, and specific anesthetics, e.g., *Chloroform*.)
acapnial hypotension and, 13178
barbiturate, effects, spinal transection and, 2218
brain changes after, hist., 16947
cardiac action of sympathicomimetic amines in, 12643
of cornea, factors affecting, 7800
cortical action potentials during, 14709
cyclopropane, effect on blood pressure, children, 13192
premedication and, 7797
divinyl oxide, effect on intestine, 346
drugs affecting salivary and pancreatic secretions during, 14801
duration, environment and, mice, 11214
pervitin as affecting, 7767
effect on lactic acid in brain, 5788
on vital capacity during labor, 2169
electrical, rats, 14466, 14475
theory, 12643

SUBJECT INDEX

Anesthetic-Anopheles

- by injection, circulatory drugs affecting,4169
- local, effect on:
- chronaxie of nerve,14795
 - isolated nerve,4026
 - opsonic index,13507
 - vibratory sensitivity,11131
- by β -(2-piperidyl)-ethanol derivatives,16818
- prolongation,4141
- factors affecting,9566
- review,4128
- of lower animals, review,1019
- of nerves, transmission and,14735
- recovery sequence after, rats,3981
-9436
- reviews,508, 7244
- signs of depth,14827
- spinal, blood gases in,254
- effect on circulation,9531
- in pig,11757
- with procaine plus Mg, Ca and Na chlorides,16763
- urea clearance after,409
- Anesthetic(s). (See also *Anesthesia; Hypnotics; Narcotics*; and specific anesthetics, e.g., *Ether*.)
- action, of allene,14808
- analeptics as affecting,16765
- of chlorocyclopropanes,2306
- of citrated chloral, horse,14834
- of deuterio- vs. ethyl alcohols,5760
- of diaminocholesterol,7805
- of isomeric amylureas and 1-amyl-5-5-diethylbarbituric acids,9550
- local, of alkoxybenzoates of dialkyl-aminoalcohols,9557
- of 1-phenyl-5-(2'-alkoxyphenyl)-3- β -piperidinoethylpyrazolone derivatives,7780
- of α -picoline derivatives,11260
- of procaine, hypersensitivity vs. chem. structure,13424
- of pyrazoline derivatives,9567
- of urethane derivatives,11257
- of propyl bromide, fish,13183
- of trichlorethanol,9554
- of ureas and barbiturates, diet as affecting,4121
- seasonal variations of response, mice,4108, 4109
- effect on:
- acetylcholine action on heart,9548
 - blood gases,254
 - intestinal absorption of sugars, 9265
 - metabolism in nerve cells,4188
 - reflex excitability,16806
 - urea action on muscle permeability,5429
 - vasomotor reversal by ergot alkaloids,7769
- ether and divinyl ether mixture as,16760
- fatal syncope due to,14818
- gases, pharmac. review,2331
- local, action of mixtures,5779
- of amino ester series, structure and action,515
- effect on chronaxy of nerves,9561
- on imbibition of water by striated muscle,16802
- ethylapocupreine as,5729
- review,4150
- nembutal as for pigs,11757
- neopentyl Cl as,13178
- spinal, new,13178
- 2,2,2-trialkyl ethanols as,544
- Anethum graveolens*, photoperiodism in,15740
- Aneuploidy. (See *Chromosome, number; Polyploidy*.)
- Aneura* (p.1863³), spp. transf. to *Riccardia*,4752
- Aneurysm, aortic arch, absent pulses in upper extremities,13127
- aortic, effect on venous pressure in arm and leg,4077
- from medionecrosis aortae idiopathica ceptica,16744
- cardiac, clin., x-ray,11163
- of coronary artery,2273
- dissecting, medial degeneration of aorta in,14777
- of horses, etiology,1565
- intracranial, therapy,4059
- pulmonary artery, in measurement of pulmonary artery pressure,14767
- in tuberculous cavities, path.,4055
- saccular, in thoracic aorta,9521
- site, cause,4089
- syphilitic, incidence,11208
- Angina, monocytic, serodiagnosis,859
- pectoris, in aortic valvular calcareous disease,5714
- benzedrine as affecting,11243
- electrocardiogram, diagnostic features,7732
- exercise tolerance, oxygen and, 16743
- in negroes, study,13134
- therapy with adequate filling,490
- Angioperis* (p.1863³), n. sp.,8421
- Angiospermae* (p.1864²),1169
- origin, phylogeny,50
- of Schleswig-Holstein, chromosome studies,50
- ANGIOTHECA (Fungi) (p.1861⁴),17500
- Anguidae (Reptilia), p.1880³
- eye, sclerotic plates, structure,5879
- Anguilla*. (See also *Eel(s)*.)
- biology,10814
- Coitecaecum* in,17937
- trimethylamine oxide in muscles in salt vs. fresh water,11758
- rostrata, range,3382
- vulgaris, hemolysins of normal sera of, constitution,6082
- Anguillula intestinalis*. (See *Strongyloides stercoralis*.)
- Anguillulina* (p.1870⁴) *dipsaci*. (See *Ditylenchus d.*)
- millefolii*, life history and hosts,1432
- Anguina tritici*, size differences in Chinese and Indian strains,17769
- Anhinga* (p.1881⁴), n. spp.,7022
- Anhingidae (Aves), p.1881⁴
- Anhydremia. (See under *Blood, water content; Water, balance*.)
- Aniba* (p.1865³), n. spp.,2865
- Aniline, di(8-aminoethyl), effect on blood pressure,13143
- dyes, effect on *Clonorchis sinensis* in vitro,4552
- poisoning, alcohol as affecting methemoglobin in,16784
- Animal(s), actinobacillosis and actinomycosis, India,11746
- aggregation and survival of planarians exposed to u.v. irradiation, 7183
- aquatic. (See *Aquatic animals*.)
- blood K in heart at death,10934
- breeding, text book,17081
- as carriers of *Capillaria* ova to man,8691
- carvings in British churches,14324
- deficiency diseases, survey,15383
- diseases of lower,2701
- of nervous system, diagnosis,15384
- of small, chemotherapy,11601
- ticks as vectors,10025
- virus, book,8209
- diving, insensitivity to CO₂,3781
- domestic. (See also *Cattle, Sheep, etc.*)
- comp. pathol. anatomy, significance,2693
- Corynebacterium equi* attacking, 13662
- diseases, wild animals as carriers,8321
- disease problems in, review,11729
- domestication and commensalism,10739
- Echinococcus* in,15969
- estrus cycle in, review,7577
- fertility, review,12552
- filariasis in skin, Dutch E. Indies,3245
- helminths, Hawaii,17916
- history,3053
- maize smut non-toxic to,12165
- morbid anatomy, book,8318
- parasites, Puerto Rico,17919
- piroplasmosis in, Rumania,1546
- tuberculosis transmission from man to,8295, 8297
- vs. tame,8069
- wild-animal diseases transmissible to, Africa,11750
- domestic and wild, blood P in,10933
- growing hair, factors determining curling in,11421
- exptl., social behavior in,8883
- fur bearing, census in Iowa,10824
- sources of internal parasites,6755
- survey, Finland,5419
- Missouri,160
- Wisconsin,5418
- grafts of homologous, antitoxin transmission via,8151
- laboratory, blood collection, apparatus for,8274
- dermatomycoses in, comp. pathol. and immunol. relations,6203
- epidemic in controlled colony, 17391
- exptl. infection with *Anaplasma* from buffalo,14175
- Johne's disease (exptl.) in,15379
- Animal (continued)
- laboratory (continued)
- pulmonitis vs. diet in,12521
 - susceptibility to trichinosis,12267
 - marine, fluctuations in abundance, 8520
 - fresh water as affecting,12628
 - O₂ consumption in relation to tidal rhythm,3494
 - O₂ lack as affecting,3867
 - physiology, book,10832
 - training,7625
 - nocturnal, radiation benefits for,342
 - rhythmic activity of *Bufo*,3497
 - nomenclator animalium,5
 - oral tumors of small,15382
 - parasitology, lab. manual,10498
 - photographing at a distance, apparatus,12463
 - preventive inoculations in, statistics,8166
 - production, Australia,2488
 - farms for,10693
 - relationships, precipitin test in determining,6066, 6117
 - serological vs. morphological classification,4515
 - small, apparatus for expts. on,227
 - surgical union yielding common coelom,11074
 - tuberculosis in wild vs. captive mammals,6253
 - tumor production in, rôle of diet,2361
 - tumors,7850
 - unusual, farms for, book,10693
 - wild, as carriers of livestock diseases,8321
 - diseases,6249
 - transmissible to domestic animals, Africa,11750
 - in winter, field manual,14318
- Animal behavior. (See *Behavior*.)
- Anion(s). (See also *Electrolytes; Ions*; and under specific anions, e.g., *Chloride*.)
- displacement in soils, silicates as affecting,4864
- effect on melanophores in fish scales,14663
- in erythrocytes,7250
- of weak acids, catalysis of lactic acid formation from sugars by,9088
- Anisocardia* (p.1872⁴) *wurganensis*, from Bavaria, Jurassic,15943
- Anisomeris* (p.1867³), n. spp.,2828A
- Anisonchus* (p.1883³), f.n. spp. (E), 18094
- Anisops* (p.1875²) *murati*,12380
- Anisoptera* (p.1875⁴), *Platymantispa* homonym of,12409
- thurifera*, wood rot of,17851
- Anisus convexusculus*, as interm. host of *Echinostoma*, Java,17911
- Anisyntra* (p.1876⁴) *dominula*, n. spp., 5144
- Anilacorthum solani*, as vector, of sugar beet yellows,15829
- Annals of Applied Biology, history, 7075
- Annelida (p.1871⁴), colonization of rocky shore by,12577
- polychaetes, benthic, of W. Greenland, monograph,1606
- Annonaceae (Dicotyledones), p.1865³
- Annual rings. (See *Bark; Tree(s); Wood*.)
- ANNULASIS (Hom.) (p.1875⁴),10605
- Anobiidae (Coleoptera), p.1876³
- Anocorys*, n. spp.,7023
- Anocetangium* (p.1863³), n. sp.,4748
- Anolis* (p.1880³), courtship behavior and sexual selection in,3984
- carolinensis*, blood cell morphology and blood coagulation time,5884
- color changes,9453
- melanophore regulation by pituitary and adrenal glands,3936
- photoreceptors, pineal eye as, 14701
- pituitary gland, anatomy,690
- Anomalothrombidium* (p.1874²) *madagascariense*,6851
- Anomaly(ies). (See under *Teratism*.)
- Anomidae (Mollusca), p.1872³
- Anomopoda (Crustacea), p.1873¹
- Anomura (Crustacea), p.1874²
- ANONCHOHAPTOE (Platyh.) (p.1870²)
- anomalum,6794
- Anonchotaenia globata*, in English sparrows,1593
- Anopheles* (p.1877³). (See also *Malaria; Mosquito(es)*.)
- breeding and use in malaria therapy of paralysis,3710
- in Brit. Guiana,5090
- in Calif.,14138
- detn. of larval population in rice field,14167
- from Georgia,12361
- incidence, Ravenna,8701

Anopheles (continued)

- larval forms, 3389
and malaria control, 8655, 14171
..... 15918, 15970
in Panama, 12270
pleural hairs, 3336
of Pontine marshes, 8664
pupae morphology, book, 12363
as vectors of filariasis, Dutch E.
Indies, 15968
of West Africa, keys, 14252
albimanus, eradication in Florida, 14140
albiparvus, eggs, Sao Paulo, 10490
exptl. *Plasmodium vivax* in, 10490
annularis, nuptial swarms, 10438
atroops, in Florida, 14140
crucians, rel. to salinity, salt marsh,
..... 12214
culicifacies, control of, 12222
trematode in, 10502
culicifacies, control, 15951
darlingi, as malaria vector, 5090
elutus, disappeared from Pontine
marshes, 8664
gambiae, dispersion epidemics, Brazil,
..... 8663
gigas v. *cedjahi*, wing markings, 12372
leucophyrus, eggs, 12368
maculipennis, habitats and dist. in
Germany, 14143
hybridization of races, 5054
mouthparts, and their function, 18007
varieties, zoophilism and an-
thropophilism, 15924
var. *atroparvus*, egg of, 8662
in fresh and brackish water, 8657
spirochaetes in salivary glands,
..... 14189
var. *mesocae*, in fresh and brackish
water, 8657
mesocae, incidence, Ravenna, 8701
minutus, as vector of malaria,
Darjeeling, 12219, 15958
pallidus, rate of malarial infection in,
..... 12219
philippinensis, egg descr., 18008
rate of malarial infection in, 12219
punctipennis, as vector of filariasis,
..... 12262
quadrinaculatus, in exptl. tertian
malaria, 5086
in rice fields, 12227
for therapeutic malaria, repeated use,
..... 14163
as vector of filariasis, 12262
stephensi, control by predaceous fish,
..... 12225
infectivity of *Pl. falciparum* for 15949
life hist. and natural infection,
Bahrein Isl., 12210
Plasmodium infection, as influenced
by chemotherapy of malaria
cases, 9915
zoophilic, and malaria free race of,
..... 12226
stirodes, exptl. *Pl. vivax* in, 10490
subpictus, natural malarial infection
rate in, 10442
nuptial swarms, 10438
vagus, natural malarial infection rate
in, India, 10442
walkeri, eggs, overwintering, 1621
- ANOPLIOPSIS** (Brach.) (p.1871*) (Cb), 8291
Anopheles spp., food habits, 5140
Anoplocephalidae (Platyhelminthes),
p.1870*, 5140
Anoplura (p.1875*). (See *Lice*.)
Anorexia, (See *Appetite*.)
Anostraca (Crustacea), p.1873*, 8785
Anotia (p.1875*), n. sp., 8785
Anoxemia, (See also *Asphyxia*; *Blood*,
Oxygen; *Oxygen*, *lack*; *Oxygen*, *tension*.)
effect on
dehydroascorbic acid/ascorbic acid
ratio in liver, mice, 10970
electrocardiogram, coronary ligation
and int., 16787
fetal intestinal movements, cat, 3769
glycogenolytic action of adrenal, 12814
rabbits, 12814
Anoxia, effect on brain potentials, 463
Anopheles, (p.1866*), n. spp., 15505
Anser (p.1831P). (See also *Geese*.)
food habits, 9064
Anseriformes (Aves), p.1881*, 9064
Anserine, chem., 9506
Ant(s), (See also *Formicoides*; and under
genera, e.g., *Crematogaster*; *Formica*.)
army, in California, note, 10610
artificial propagation, for forest insect
control, 8521
attacking lac and its predators, India,
..... 14102
of East Baltic countries, 18026
evolution and social behavior, compared
with man, 8871
inhabitants of *Endospermum*, 3438
as intermediate hosts of poultry ces-
todes, 14160
larvae with vestigial legs, 6930
nests, ecology, and myrmecophiles in,
..... 3354
red (*Solenopsis*), on rice caseworm lar-
vae, Philippines, 5039
tourist, distr. by ships, 16250
venom, hyposensitization to, by whole
bee extract, 15156
white, (See *Termites*.)
Antagonism(s), of bacteria, (See under
Bacteria.)
of drugs, (See *Drugs*, *antagonism*.)
of ions, (See under *Ions*.)
Antatidae (Aves), p.1881*, 15954
Antelope(s), *Tryp. rhodense* in, 12247
effect on infectivity for man, 12247
water, *Eimeria* in, 14204
Antennaria (Dicot.) (p.1867*), key to Wash-
ington spp., 1158
parthenogenesis and meiosis, 3445
Antennaria (Pisces) (p.1880*) *marmoratus*,
morph., habits, 16056
Antennariidae (Pisces), p.1880*, 16056
Anthaxia (p.1876*), tax., 3331, 12356
Anthelmintic(s), (See also under specific
anthelmintics, e.g., *Carbon tetrachloride*; *Chenopodium*; *Emetin*; and
under worm parasites, e.g., *Ancylostoma*,
Hookworm.)
for calves, Philippines, 1562
Ficus latex as, 15696
"Raigan" as, 9924
for strongylids of ruminants, 15947
tetrachloroethylene as, 5753
in trichinosis therapy, 8713
Anther. (See under *Stamen*.)
Antheraea (p.1876*) *pernyi* body fluids,
physico-chem. properties, 7354
eggs of, temp. and humidity relations,
..... 3223
yamamai body fluids, physico-chem.
properties, 7354
Antherozoid. (See *Sperm*.)
Anthesis. (See *Flower*; *Phenology*.)
in *Beta*, relation to pollen dissemination,
..... 6459
of ♀ and ♂ flowers in corn, duration as
affected by drought, 13811
Anthidium (p.1878*), new subsp., 1633
Anthocoridae (Hemiptera), p.1875*, 1633
Anthocoris nemorum, enemy of red spider
mite, 5018
Anthocyan(s), (See under *Pigments*.)
Anthocyanin(s), (See under *Pigments*.)
Antholyza *Gladiolus* hybrid, sterile, 5322
ANTHOMASTINAE (Coel.) (p.1869*), n.
subfamily, 6777
Anthomedusae, nematocysts, England,
..... 3278
Anthonomus (p.1876*), n. spp., 3769
grandis, control, 5026, 5031, 5040, 6713
Anthopteris (p.1866*), spp. transf. to
Themistoclesia, 10153
Anthozoa (Coel.) (p.1869*). (See also
Corals.)
Anthracene, carcinogenic effects, mice,
..... 11295
effect on hemolysis, 12763
picrate, distilled from irradiated chol-
esterol, 18224
Anthracoceros (p.1872*) *oklahomense* (Cb), 8741
Anthracograms. (See *Ash patterns*.)
Anthracosis, tuberculosis incidence,
miners, 14985
Anthracothecium (p.1861*) *panciloculare*,
..... 15474
Anthrax. (See also *Bacillus anthracis*.)
antisera, flocculation zones, basis, 2565
specificity with conjugated azopro-
teins, 851
bacteriotherapy, local cutaneous, 8100
dissemination by stagnant pools, 2706
effect on vegetative nervous and endo-
crine systems, 4679
immunity to, capsular antibody rôle,
..... 2583
lead acetate as affecting, 17185
mechanism, 851, 4541
rabbits and mice, 6122
immunization to, method of active, 4541
by sterilized anthrax edema fluid, 6122
immunotherapy in animals and man, 867
incidence in animals and man, Bulgaria,
..... 867
- infection, mechanism, 851
preventive inoculations for, statistics,
..... 8166
prophylaxis, by hormone preps., 6113
symptomatic. (See also *Clostridium*
chauvoetii.)
preventive inoculations for, statistics,
..... 8166
in Rhodesia, 2717
serol. comparison of organisms of
para-form and, 940
in Uganda, 2718
vaccination, effect on vegetative nervous
and endocrine systems, 4679
Anthreptes (p.1882*) *longuemarei nyassae*,
breeding habits, 5195
Anthropoids. (See also under specific
anthropoids, e.g., *Chimpanzee*.)
blood groups, 4535, 9725
hypophysis, review, 11406
malaria, exptl. transmission, 12264
Anthropology. (See also *Anthropometry*;
Man.)
analysis of self portrait of Philipp Otto
Runges, 9754
archaeological work in Asia Minor,
review, 17011
artefacts associated with cranial frag-
ments, E. Africa, 9755
bone breccia in central Transvaal, 9745
classification problems, use of statistical
methods in, 17025
display at University of Munich, 11437
methods for typing of dried muscle and
mummified flesh for blood groups,
..... 15054
methodology, rôle of pollen analysis in,
..... 17028
physical, contributions of T. Wingate
Todd, 15056
of German villages, 9730
of Silesians, 9736
prehistoric archeology, book, 726
review, 5930
rôle of genetic factors in physical-eth-
nology and history, 17008
Sterkfontain bone breccia, geog. loca-
tion, 9724
Anthropometry. (See also *Anthropology*;
Blood groups; *Body*; *Cranimetry*;
Man; *Skeleton*.)
adjustable cranial orientator, 15057
equation for predicting body wt., 721
formulae for segregation of body types,
..... 2454
growth determinants, analysis, and
methods, 2453
measuring auricular height of living,
technic, 2456
new constitution index, 2463
photographic method, fallibility, 9747
populations, intracranial distr. of metri-
cal characters, 17026
portrait profile with roentgenogram in-
corporated, 17007
practical, book, 9741
regression coefficients based on anatomi-
cal measurements, 727
relative size of upper extremities in
children, 17034
twins studies, 2461
value of Ponderal index as a nutritional
index, 5922
Anthurium (p.1864*), n. spp., 2827A, 2828A
plants produced from seed, variations
in, 1236
Anthus (p.1882*), spp. bird banding,
..... 14296
campestris, behavior notes, 7031
Antianaphylaxis. (See *Desensitization*.)
Antiartha (Ostracophori), p.1878*, 1236
Antibiosis, of *Penicillium* to *Pythium*, 4997
of soil microorganisms to seed-borne
phytopathogens, 1464
of wheat mildew to bunt, 4994
Antibody(ies). (See also *Agglutinins*; *Anti-
gens*; *Antienzymes*; *Antitoxins*;
Hemolysins; *Immune bodies*; *Im-
munity*; *Opsonins*; *Precipitins*; *Re-
agins*; etc.)
ablastin, to trypanosomes, 945
action, epinephrine as affecting, 6107
adsorbability of antilipid vs. anti-
polysaccharide, 13457
-antigen ratio, calculation, 17153
in specific precipitates vs. molecular
wt., 9834
-antigen reactions, between layers ad-
sorbed on stearate films, 11554
blood incompatibility and, 2554
-antigen specificity, orientation in mono-
molecular films, 17125
axial susceptibility to, *Euplanaria*, 7611
in blood, estrogens and ovariectomy as
affecting, 2130

- to carbohydrates, 922
 chronic inflammatory tissues as affect-
 ing, 17151
 circulating, neutralization of pathogens
 in tissues by, 11528
 dissociated, reactions as influenced by
 formaldehyde, 848
 with specific polysaccharide, 848
 Forssman, serodiagnosis, by clearing re-
 action, 809
 to gonadotrophic hormones, 17175
 heterogenic, in pulmonary tubercu-
 losis, 2543
 in skin diseases, 846
 heterophile, allergy relations, 13484
 isolation from immune precipitate,
 mechanism, 8125
 in mixed immunizations, individuality,
 13451
 quantitative relations, 13452
 molecular wt., 2546
 neutralization of pathogenic agents in
 tissues by, factors affecting,
 8111, 8112, 8113, 8114
 permeability of blood-brain-barrier to,
 8113, 13486
 placental permeability to iodine vs.,
 8146
 production, biological, in vitro-produced
 agents reproducing action, 6073
 as influenced by:
 hypertonic solns., 899
 hypophysectomy, 17181
 nicotinic acid salts, 2552
 sulphone compounds, 8098
 synergic action, 869
 mare serum and prolan as antigens,
 rabbit, 7551
 mechanism, 13476
 of specific, natural immunity unre-
 lated, 13411
 purification, by electrophoresis, 2582
 tissue distr., 8162
 titers, as influenced by malnutrition,
 children, 8106
 by quinine with and without ir-
 radiation, 13410
 in tobacco after recovery from curly
 top, 17795
 trypanocidal, 945
Anticarsia gemmatilis, on soybean, control,
 5024
 Anticoagulants. (See under *Coagulants*.)
 Antiendotoxic action, of chemotherapy,
 6142
 of organic sulphur compounds, 2656
 Antienzyme(s). (See also *Antibodies*; and
 under *Enzymes*.)
 anticalase, prep. and activity, 12679
 anticholinesterase, central action, 16644
 of human sera, therapeutic horse sera
 as affecting, 4518
 thyroxine and di-iodothyroxine as af-
 fecting, 8123
 Antifibrinolytic(s). (See also *Fibrinoly-
 tics*.)
 activity, in hemolytic streptococcal in-
 fections, 4519
 differences in hemolytic streptococcal,
 4488
 quantitative relation of fibrinolytic and,
 4481, 4487
 Antiformin. (See under *Hypochlorite*,
sodium.)
 Antigen(s). (See also *Agglutinogens*; *Anti-
 bodies*; *Antigenicity*; *Immunity*; *Pro-
 teins*; *Toxins*; *Venoms*; and under
 specific organisms, etc.)
 -antibody ratio, calculation, 17153
 in specific precipitates vs. molecular
 wt., 9834
 -antibody reactions, between layers ad-
 sorbed on stearate films, 11554
 blood incompatibility and, 2554
 rôle in glomerular capillary walls of
 kidney, 4521
 -antibody specificity, orientation in
 monomolecular films, 17125
 bacterial, flagellar, of *Listeria* strains,
 4716
 glucido-lipidic, detn., 13400
 in *Pasteurella* strains, 892, 893
 specificity in paratyphoid and dys-
 enteric strains, 803
 in *Salmonella*, 2550
 labile, 13456
 lecithin-broth culture as affecting,
 17305
 purification, 17183
 residual, specificity in *Salmonella*,
 2550
 single-phase, prep. by swarming
 effect, 9845
 Antigen (continued)
 bacterial (continued)
 somatic, of typhoid-bacillus, chem.
 and props., 2518
 Vi., in paratyphoid-O strains, 13475
 from blowfly larvae, as affecting bac-
 terial disease, 12216
 Boivin, immunization value of lanolin
 mixture, 4478
 chronic inflammatory tissues as affect-
 ing, 17151
 copper-treated, atoxicity, 13454
 dibenzanthranil-carbamido-casein, in
 immunity to tumor produc-
 tion, 16852
Drosophila, taxonomic significance,
 14367
 dye-protein, cellular reactions, 13476
 etherogenic, in mononucleosis, 11552
 extracts, skin reaction curve with serial
 dilutions, 6044
 Forssman, in fish, 4515
 heterospecificity in pathogenic bac-
 teria induced by, 17170
 serodiagnosis, by clearing reaction,
 809
 in tuberculous caseous substance,
 6042
 Frei, from mouse brain, standardiza-
 tion, 13426
 heterogenic vs. homologous, animal
 relationships as shown by, 4515
 in tubercle bacilli, 2543
 heterophile, effect on immunol. proper-
 ties of serum after pneumococcus
 injection, 17178
 formation induced in bacteria, in
 culture, 11534
 in vivo, 11535
 immunization, by artificial review, 9840
 by mixed, individuality of antibodies
 produced, 13451
 quantitative antibody relations,
 13452
 kokto-, serological behavior of native
 vs., 4506
 lipid, in Jensen sarcoma, 2527
 Mesrobianu, immunization value of
 lanolin mixture, 4478
 placental permeability to I vs., 8146
 race-specific, 11563
 "serum-sickness," 4526
 skin reactions as indicators of activity,
 6044
 stereo-isomers, flocculating power and
 specificity, 6073
 synergy, 869
 volume vs. absorption rate, 9828
 Antigenicity, of carbohydrates adsorbed
 on Al(OH)₃, 922
 of catalase, 12663, 12679
 of egg-white of duck on duck, hen
 and rabbit, 905
 epinephrine as affecting, 6107
Antigona (p.1872*), n. sp., 6828
Antilocapridae (Mamm.) (p.1883*), taxo-
 nomy, 8867
 Antimony, as catalyst, for tubercle bacil-
 lus, 10090
 compounds, effect on sugar metabolism,
 7792
 on white blood picture, 822
 in kala azar therapy, 822
 trimethylstibine, pharm., 13179
 in control of nasal schistosomiasis in
 cattle, 1545
 therapy, in schistosomiasis, eosinophilia
 after, 14178
 Antimony and potassium tartrate, effect
 on relapsing-fever vs. *Trypanosoma*
rhodesiense, 13542
 as insecticide against citrus thrips,
 10388
 in trichinosis therapy, 8713
 as vermifuge, calves, 1562
 Antioxidants, cereal flours as, 17090
 keeping quality of crackers improved
 by, 15400
 oat-flour as, 15400
 Antipyretics. (See also specific anti-
 pyretics, e.g., *Quinin*.)
 analgesic action, 9537
 coal tar, therapeutic indexes, 14793
 Antipyrine compounds, anesthetic action,
 7780, 9567
 effect on heat center, 13073
 on oxidation of phospholipids, 14785
 porphyrinuria due to, rat, 16444
 therapeutic index, 14793
Antirrhinum (p.1867*) (See also *Snap-
 dragon*.)
 as affected by fast neutrons, 1738
 chemico-genetical relation of antho-
 cyanins, 12519
 rust resistant vars., 2982
 self-sterility in, linkage with flower
 color, 5319
majus, effect of x-rays and cold on
 chromosomes, 12501
 intracellular gene effects of trans-
 plants, 8944
 linkage studies, 76
 meiosis, as affected by heat and
 cold, 10713
siculum, intracellular gene effects of
 transplants, 8944
 Antisepsis, intestinal, by lecithin soap,
 4563
 Antiseptic(s). (See also *Bactericides*; *Dis-
 infectants*; *Fungicides*; under spe-
 cific agents, e.g., *Mercury chloride*.)
 -dusting powders, test method for,
 11677
 effect on nitrite content of tank pickle,
 10046
 liquid, germicidal coefficients, detn.,
 4649
 mercury compounds as, 13178
 oral, efficiency, 2104
 phenylmercuric compounds as, 2677
 resistance to, peptone as affecting, .998
 skin, activity, 13139, 13178
 surgical, effect on bacteriophages,
 17283
 in trichinosis therapy, 8713
 Antiseptic action, of dental pastes, .4650
 of horse-radish vapors, 2724
 urinary, of phenothiazine, 7756
 Antiserum(s). (See also *Blood serum*;
Hormones; *Vaccines*; etc.)
 antigenadotrophic, abortion produced
 by, dog, 14687
 conc. methods, 9390
 effect on puberty or estrus cycles,
 rat, 9389
 produced in both sexes and castrates,
 9387
 by sex hormones, 9388
 antihormones, review, 14644
 antimammotrophin serum, species
 difference, 16591
 antipituitary, effect on ant. pituitary,
 9372
 antisheep hemolytic horse, acetylation
 as affecting, 13423
 antithyrotrophic activity produced by
 pituitary extracts, 9361
 bio-assay, standardization, 6069
 -chemotherapy synergy, 8185
 contaminants in, detection as influenced
 by agar conc., 8259
 convalescent, for measles therapy,
 11546
 for pertussis therapy, 11543
 for streptococcus infections, 11545
 for crystalline serum albumin, speci-
 ficity, 17117
 dehydration and preservation method,
 6048
 to diazotized arsinilic acid derivatives
 linked to horse or pig sera,
 specificity, 13447
 effect on proteinases of *Clostridium*
spp., 15162
 electrophoretic study, 2582
 to gonadotropic extracts, effect when
 combined with pituitary extracts,
 12991
 immune precipitate of egg-albumin,
 precipitin isolation from, 8124
 koktospecific, differentiation of raw and
 cooked meats by, 4506
 N-, production of highly potent, 4536
 to ox pituitary extract, specificity,
 12950
 peptides and specificity, 11543
 phenol adsorption by protein in prep.,
 4651
 physico-chem. properties, as influenced
 by conc. and effect on absorption,
 6067
 precipitating, purification by saturation,
 8133, 8134, 8135
 to pregnancy urine gonadotrophin,
 11052
 prep. of purified, 4439
 preservation from frozen state by
 chemical desiccants, 4507
 produced by pregnancy urine, 9368
 9387, 9388, 9389, 9390
 proteins in, proteolytic enzymes as
 affecting, 17188
 specific, detn., 13398
 purification from viscous protein, 13412
 reagin-containing, preservation by
 lyophilization, 6108
 removal of factor causing serum sick-
 ness, 17135

- Antiserum (continued)
 specific precipitation with polysaccharide, formaldehyde and pH as affecting,848
 sterilization of thermolabile, bactericides and,8283
 sulfanilamide therapy and, for hemolytic streptococcus infections,4569
 therapeutic evaluation by exp. pneumonia,13462
 Vincent's anti-collibacillary, in appendicitis post-operative therapy,17164
- Antistreptolysin(s). (See also *Streptolysin*.)
 reactions, nature, technic and epidemiol. applications,13425
- Antitoxin(s). (See also *Antibodies*; *Antivir*; *Immunity*; *Immunization*; *Toxins*; and specific antitoxins.)
 bio-assay, standardization,6069
 consecutive increase in nephrectomy or dehepatization as affecting, 6100
 contaminants in, detection, agar conc. as affecting,8259
 dehydration and preservation method,6048
 demonstration of small amts. of tetanus,2528
 formation, mechanism and factors affecting,13481
 passage to cerebrospinal fluid, in active immunization,6102
 in passive immunization,6103
 permeability of vascular meningeal barrier to,13486
 phenol adsorption by protein in,4651
 preservation from frozen state by chemical desiccants,4507
 production in horses, flocculation relation,8154
 purification and conc. by adsorption and pepsin autolysis,8118
 by enzyme autolysis and heating,8119
 enzymatic,4497
 methods compared,17188
 by proteolytic enzymatic digestion,17188
 transmission through homologous animal grafts,8151
- Antivenin(s). (See also *Venoms*.)
 of black widow spider, production, 9888
 crovaldic, polyvalency,15138
 effect on blood-coagulating action of venom,17142, 17143
 heterologous, neutralizations of venoms by,4467
 mice as test animals for,17143
- Antivir, Besredka's. (See also *Immunity*, local.)
 anthrax therapy by,8100
- Antonina (p.1875⁴) indica, on sugar cane,3186
- Antroous (p.1882²) pallidus cantwelli, in Oregon,5222
- Antrypol, detn. and retention in body,8175
- Anura (Amph.), p.1880⁴. (See *Frog*; *Toad*; and under genera, e.g., *Rana*.)
- Anuraphis maidi-radix, on maize, as affected by crop rotation,17865
 roseus, control of, coal tar oil,12180
- Anurea aculeata, mictic and amictic individuals,14220
- Anus, formation, in tree frog,13336
 in urodeles,4391
 pruritis, causes,8246
- Aonidiella aurantii (scale insect), serological differentiation from *A. citrina*,1482
- Aonidomytilus (p.1875⁴), n. sp.,10605
- Aorta. (See under *Blood vessels*.)
- Aortic nerve. (See *Nerve*, depressor.)
- Aorus (p.1870²) apile and subcolatus, synonymy,17950
- Aotus zonalis, new host for *Protoparva* (nematode),15955
- Apalis (p.1882²), n. ssp. in,5197
- Apanteles (p.1878²), palaeretic spp., 14271
 parasite of pink bollworm,12231
 carposinae, on *Carpocapsa*,10458
 congregatus, hyperparasites of,5067
 on *Protoparce* and sphingid larvae,5067
- apanteles, attempted introduction into Hawaii,3208
- Apanteles (p.1877⁴) arge, prothoracic glands,16041
- Apes, anthropoid, blood groups, 938, 13521
 cerebral cortex, structure,4334
 limb bones, relative growth in, 17021
 materials in American collections, catalogue,2459
- Aphaenogaster (p.1878⁴), n. sp.,6922
- Aphaenops (p.1876²), n. form,12345
- Aphanes (p.1865⁴), n. sp.,2865
- Aphanus (p.1879²) dispar, for control of *Anopheles stephensi*,12210
- Aphanocapsa, (p.1860³), n. sp.,8385
- Aphanomyces (p.1861³) phycophilus, culture of,1082
 from *Spirogyra*,1082
- Aphanothece (p.1860³), n. sp.,8385
- Aphanurus (p.1869⁴) harengulae,6803
- Aphasia, clinical, path. and classification,2408
 encephalogram,11356
- Aphelandra (p.1867²), n. spp., 2827A, 6437
- Aphelenchoides (p.1870³), n. sp.,10547
- fragariae, on begonia, control, by hot water treatment,3150
- hunti, biological notes on,17772
- parietinus, microsporidia,16000
- Aphelinus (p.1878⁹), spp. parasitizing aphids,10451
- malii, on *Eriosoma*,17855
- Aphelocoma (p.1881⁴) californica, habits, breeding,16100
- Aphid(s). (See also *Aphididae*.)
 apple, control, dormant ovidial sprays,12178
 control,12184
 on canning peas,12202
 on fruit trees,5015
 notes and,14129
 food-plant catalogue, book,14261
 frequencies of winged and intermediate winged,12383
 gall-like swelling on oak due to,8648
 gamic ♀, morphogenesis,9789
 green peach, on spinach, control, 17879
 increase after control of other insects,12197
 life-history studies, mathematics in,3476
 parasites, Ont.,10451
 parasitizing, by *Aphelinus marlattii*, in greenhouse,10451
 resistance of raspberry to,8637
 on *Spiraea*,18020
 as vectors, of pea mosaic,3128
 of sugar beet mosaic,6657
 of Western celery mosaic,3132
 of wheat, note,12382
 woolly. (See *Eriosoma lanigera*.)
- Aphidecta obliterata, predator on *Lygacematus*,5051
- Aphididae (Homoptera), p.1875⁴
 as determining factors in dist. of *Ranunculus*,3514
 as food for *Syrphus*, Saxony,8649
- Aphidius (p.1878²), spp., parasitizing aphids,10451
- Aphiochaeta agarici, asthma due to hypersensitivity to,6059
- Aphis (p.1875⁴). (See also *Aphid(s)*.)
 n. spp., pest of celery,3348
 as vectors of abaca mosaic,4978
 forbesi, on strawberry, nature and extent of damage,1489
 gossypii, on cotton, control,6696
 population in relation to leaf pilosity + Ca arsenate dusting,5023
 maidi-radix, as affected by plowing,17864
 maidis, as vector of sugarcane mosaic,15832
- Aphlebia (p.1864²) australis, (Ob),2786
- Aphodius (p.1876²), n. sp.,12353
 in Sahara,12352
 serofa, in Maine,12344
- APHOS (Pisc.) (p.1880⁴), spp. transferred to,12421
- Aphrodita (p.1871¹), syn.,17962
- Aphroditiidae (Annelida), p.1871¹
- Aphronorus (p.1882²), n. spp. (E),5225
- Aphrothoraca (Protozoa), p.1868²
- Aphthous fever. (See *Foot-and-mouth disease*.)
- Aphylopteris (p.1864²), † delawarensis (D),13716
- Aphyocharax (p.1879²), tax.,5156
- Apiaceae (Dicotyledones), p.1866²
- Apical cell. (See *Meristem*.)
- Apiculture. (See also *Apis mellifica*; *Honey-bee*.)
 American, history,1534
 in Ceylon,14154
 disease in, eradication, U. S.,14150
 in Egypt, history and present condition,8673
- Apton (p.1876²) tubiferum, n. var.,12349
- Apis (p.1878²) fasciata, in Egypt, yesterday and to-day,8673
- griseocollis, syn.,12384
- indica, apiaries of Ceylon,14154
- mellifica. (See also *Apiculture*; *Honey-bee*.)
 respiratory metabolism during development,13345
 selection and breeding for temperament,8672
 venom, hypsensitization to, by whole bee extract,15156
- Apisoma schattenbergi (Jur),15943
- Apistogramma (p.1879²), n. sp. from S. America,6947
- Apium graveolens. (See also *Celery*.)
- Aplanobacter michiganense, as vascular parasite, physiology,4970
- stewartii. (See also *Phytomonas stewartii*.)
- bacteriophage, from aqueous extracts of cereal seeds,6675
- Tripsicum dactyloides as host,6639
- Aplastomorpha calandrea, parasite of cotton stem-weevil,14266
- Aplopappus (p.1867⁴), n. sp. and n. comb.,13751
- hartwegi, chemical composition,17664
- Aplysia (p.1872²), eggs, segregating substances during development,770
- Apnea. (See under *Respiration*, alveolar.)
- Apo-atropine, in chronic encephalitis, 517
- pharm.,517, 536
- Apo-2-carotinal, vit. A activity,2055
- Apocholic acid, ultraviolet as affecting,12690
- Apocope (p.1879³) nevadensis, distr. in California,6962
- Apocupreine, amyl and hydroxyalkyl ethers, toxicity and anti-pneumococci action,16778
- hydroxyethyl, pharm.,13178
- Apocynaceae (Dicotyledones), p.1866⁴
- Apocynum venetum, growth and fiber character, as influenced by x-rays, 1387
- hybridization in,77
- Apodachya (p.1861³) minima,15143
- Apodemia (p.1876⁴) mormo r. langei, 5142
- Apodemus (p.1883³), absence of Y chromosome,7121
- ecology,5239
- ylvaticus, Ascaris infestation of lungs, exptl. studies,14186
- Apodes (Pisces), p.1879². (See *Eel*.)
- Apogamy. (See also *Apospory*; *Parthenocary*; *Parthenogenesis*.)
 cytology in fern,6375
 in fruit trees,11974
 in pteridophytes, review,17561
- Apoidea (Hym.), p.1878⁴. (See also *Bees*.)
- Apomixis. (See also *Apogamy*; *Apospory*; *Parthenogenesis*.)
 effect on distr. of *Crepis* (Dicot.), 4777
- Aponurus (p.1869⁴), n. spp.,6803
- Apospory. (See also *Apogamy*.)
 and chromosome number in *Sceloporus draculus vulgaris*,5307
- in *Crepis*,14365
- cytology in fern,6375
- and polyploidy, in *Hypericum* hybrids,16183
- in pteridophytes, review,17561
- Apparatus. (See under names indicating the use or nature of the apparatus.)
- Appendages, legs, innervation, crustacea,466
 thoracic legs, regeneration in crustaceans,11470
- Appendicitis, acute, streptococci from,880
 serol. strains,9603
 effect on appendiceal musculature, 9603
 post-operative therapy,4554, 17164
 preoperative serotherapy,4527
- Appendix, vermiform, changes in foetus,4382
 relation of flask-shaped glands and lymph nodules, rabbits, 9684
- Appetite. (See also *Hunger*.)
 for carbohydrate, protein and fat, vit. B deficiency as affecting, rat,12643
 diet and,7403
 feed consumption and, growing cattle,5978
 mineral, after parathyroidectomy, rat,14549
 vit. B deficiency as affecting,3728
 morphine and,5848
- Apple. (See also *Fruit*; *Horticulture*; *Pomology*; *Malus*; *Pyrus*.)
 anatomy of root and shoot primordia,11928
 ash and N content of shoots, factors affecting,1275
 Baldwin, biennial bearing habit, 15593
 black pox (*Helminthosporium papulosum*), occurrence, Penna., 15889

Apple (*continued*)
 blooming period, relation to spraying dates, Ohio, 3147
 borers, control, effect on trees and parasites, 10391
 brown core, storage conditions as affecting, 11987
 brown rot (*Sclerotinia*), var. resistance, Germany, 10368
 bud mutations in Portuguese vars., 14361
 budding, abnormal behavior of Oldenburg on Malling, 13907
 canning, use of peel in, 10063
 catalase in seedlings, N, P, and K as affecting, 14030
 chemical comp., changes during ripening, 17718
 for cider, culture and vars., France, 1278
 codling moth on, Netherlands, 14104
 collar rot (*Phytophthora cactorum*), 17746
 constituents, effect on retention of Pb in spray residues, 14550
 consumption, place of research in increasing, 15605
 core flush, storage temp. as affecting, 17637
 cork spots, distinguished from B deficiency, 4983
 Cortland and Early McIntosh, incompatibility, 11995A
 crab, culture and yields, Michigan, 8490
 cracking of fruit, causes, 3007
 crown gall. (See also *Phytoplasma tumefaciens*.)
 control, 10354
 effect on tree growth, 3169
 culture and drought resistance, var. trials, Kans., 15606
 Eriosoma spp. on, 17855
 European red mite on, control, Connecticut, 15896
 fire blight. (See also *Erwinia amylovora*.)
 dissemination and control, Iowa, 14097
 environmental relations and control, 17764
 susceptibility factors affecting, 15863
 viability of pathogen in exudate, 6640
 fluorine spray on, removal, methods, 14111
 fruit, buds, temp., 6512
 emanation, effect on plants, 1415
 stimulating tumor growth, *Helianthus*, 14052
 growth and development, pollen source as affecting, 6526
 injury, due to *Lygus pratensis*, N. Y., 12177
 keeping quality, mineral nutrition as affecting, 10376
 morphology, 10230
 seed number, related to time of drop, 13912
 set, Cu sprays as affecting, 14094
 set and size, branch ringing as affecting, 13900
 spot, from storage with early-ripening fruit, 1446
 wax content, changes during ripening, 10222
 Graham, chimeric nature, 13878
 growth and mortality of grafts, factors affecting, 4880
 hairy root, effect on tree growth, 3169
 hardy stocks, Poland, 3014
 injury, by Cu compounds, 14149
 due to June beetle, Finland, 12201
 by *Metatetranychus* and control, 5018
 insect pests, *Coleophora prunella* on, Ore., 14109
 control with pyrethrum, 10400
 insecticides, and fungicides, program, Del., 12179
 injury, due to lauryl rhodanate, 12178
 prevention by MgO, 10394
 Pb arsenate residues and removal, 14112
 internal bark necrosis, due to B deficiency, 3169
 control by B treatments, 3146
 irrigation as affecting, Nebraska, 15620
 juice, pasteurization, 1020, 1032, 2730
 leaf blight (*Entomosporium maculatum*), 15801
 leaf scorch, K as affecting, 1237
 leafspot (*Pabraca maculata*), 3108
 (*Phyllosticta angulata*), England, 15306
 McIntosh and Northwestern Greening, storage in gas, 11987

Apple (*continued*)
 McIntosh and Wealthy, propagation and stocks for, 13911
 maturity tests, Jonathan and Grimes Golden, 11977A
 mosaic (virus), natural spread, 3120
 N metabolism in, 10330
 number and size, blossom thinning as affecting, 13865
Pantomorus beetle on, n. sp., 6882
 pectin and uronic acid in, 6517
 perennial canker (*Gloeosporium perennans*), after injury by wound dressing, 15859
 photosynthesis in leaves, factors affecting, 17711
 plum curculio on, life hist. and control, New York, 3173
 polarity in, factors affecting, 15783
 pollen abortion, cytology and morphology, 2997
 pruning, relation to mosaic spread, 3120
 raw, effect on intestinal flora, 7399
 respiration, changes with maturity, 12096
 factors affecting, 10325
 by fruit, apparatus for measuring, 12095
 measuring volatile products liberated during, 8579
 in storage, factors affecting, 17716
 ripening, ethylene produced in, 10327
 in storage, temp. as affecting, 1252
 roots, growth, light as affecting, 17715
 varietal resistance to woolly aphid, 1492
 rootstocks, storage temp. for, 10223
 structure correlated with vigor, 17623
 rust. (See also *Gymnosporangium*.)
 aeciospore dissemination and infection, control and, 17755
 comparative etiology, 17754
 environmental relations, 15890
 varietal resistance tests, 3141
 in relation to plural spp. of pathogen, 3169
 scab. (See also *Venturia inaequalis*.)
 control, 6677, 6681
 by phenothiazine spray, 15871
 infection factors and control, Iowa, 14097
 scald, storage with early-ripening fruit as affecting, 1446
 scurfy scale on, life history and destructiveness, New York, 3174
 seasonal chemical cycles in shoots, rootstocks as affecting, 8502
 sprays dormant for aphid eggs on, 12178
 spray injury, by Cu, As and oil mixtures, 3169
 var. differences in susceptibility, 6679
 spray removal, materials for, 3169
 spray residue on, comp. of arsenicals, 12176
 and factors affecting amt., 3179
 spraying, Nova Scotia, 10375
 Ohio, schedules, 14092
 stippen, distinguished from B deficiency, 4983
 storage, disorders, relation to crop size and chem. and phys. characters, 1232
 quality, waxing as affecting, 13885
 use of gas in, 1262
 tetraploid seedlings from triploids, 12518
 trees, comp. of bark and wood, season and rootstocks as affecting, 1267
 grafts, water conductivity in, 8512
 grafting, coatings used in, 1231
 relation between stock and scion, 2979, 2994
 growing with roots in two containers, method, 13903
 in Massachusetts, management, 14427
 N fertilizers compared, W. Va., 15610
 rainfall and temp. as affecting, 8985
 removing soot from, 15589
 root systems, soils as affecting, 8504
 soils for, 15587, 15588
 top-working, method, 8491
 transplanting, recovery from, Vt. vars. compared, 4868
 winter injured, restored by bridge-grafting and inarching, 2987
 yield as influenced by:
 early fruit thinning, 2993
 lime sulphur spray, 3169
 top-working, 13868
 value in infantile diarrhea, 2003

Apple (*continued*)
 variety tests, Illinois, 13894
 vit. C in, 9236
 water core in, N as affecting, 13882
 white root rot (*Corticium galactinum*), 3169
 Apple aphid, control, 12180
 Apple borer. (See *Chrysobothris*.)
 Apple codling moth. (See *Codling moth*.)
 Apple leafhopper, white. (See *Typhlocyba pomaria*.)
 Apple red bug and green bug, control, 10400
 Apricot. (See also *Prunus*.)
 brown rot (*Sclerotinia*), California, var. resistance, 10343
 chalcidoid pest, India, 14079
 dried, color and SO₂ retention, factors affecting, 17858
 polyploidy and pollen grain size, 6518
 Aptesis (p.1872), new species on hemlock sawfly, 1742
 Apus (p.1881) *a. apus*, bird banding, 18025
 Aquarium, aerator for, production, 14296
 construction and care, book, 17742
 diatom incrustation, *Arcella* feeding on, 12282
 Aquatic, animals, of fresh waters, ecology, 137
 tissue salt conc., 9152
 biota in streams polluted by acid waste, 14399
 insects, ecology, 1830
 media, O₂ consumption of salamanders in, 3778
 plants, fauna, 107
 management, propagation, book, 3537
 photosynthesis at different depths, 7230
 transpiration in, 4938
 utilization by wild fowl, book, 3537
 vegetation, 7212, 10781
 Aqueous humor. (See under Eye.)
 Aquiliculture. (See *Fish culture*; *Fisheries*.)
 Aquifoliaceae (Dicotyledones), p.1866¹
 pollen in honey, 8670
 Aquila chrysaetos, blood-sucking maggots in nest, 1564
 Aquilegia (p.1865), cytogenetic studies in aneuploid types, 5293
 leaf blotch (undet.), in England, 15806
 Arabella (p.1871), syn., 17962
 Araceae (Monocotyledones), p.1864⁴
 Arachis hypogaea. (See also *Peanut*.)
 Arachnida (p.1874). (See *Spiders*; *Mites*; *Ticks*; etc.)
 bibliog. and list, Wash., 12170
 on edible fungi, bibliography, 8646
 Arachnothera (p.1882) *affinis* pars, 10647
 Arachnoxylophaga (p.1864) *kopfi* (D.), 2735
 Aracoda (p.1871), syn., 17962
 Aradidae (Hemiptera), p.1875⁵
 Arales (Monocotyledones), p.1864⁴
 Aralia, respiration of leaves, N as influencing, 8581
 cordata, Phoma blight of, 10351
 Araliaceae (Dicotyledones), p.1866³
 Aranea (p.1874), n. sp., 3318
 foliata, ecology, 6864
 silvicultrix, ecology, 6864
 Araneae (Arach.), p.1874². (See also *Spiders*.)
 Aracearia (p.1864), in Argentina, 15484
 bidrillii, frost resistance, 17646
 Arbacia (p.1872), clot formation in perivascular fluid, 247
 eggs, permeability constant for penetration of ethylene glycol into, 1887
 eggs, permeability to water and solutes, 16303
 punctulata, hermaphroditism in, 16006
 sperm extracts as affecting fertilization reaction in, 9419
 pustulosa cell division, mechanism, 4388
 eggs without nuclei, fertilization and development, 767
 Arbaciidae (Echinodermata), p.1872²
 Arboretum. (See also *Botanical garden*.)
 in Pennsylvania, Michaux, 5275
 Area (p.1872), n. sp., 6828
 functional anatomy of bivalve, 10560
 campechiensis blood cell morphology and blood coagulation time, 5884
 Arcella, feeding on diatoms, 12282
 Arcellidae (Protozoa), p.1868⁸
 Arcuthobium (p.1865), n. syn., 1158
 Archaeoceti, monograph, 5235
 ARCHAEOCHELYS (Rept.) (p.1880)
 pougeti, 16057
 Archaeology, prehistoric, book, 726

- ARCHAEOPODAGRION** (Odonata) (p.1875²), bicorne,16047
Archaeopodagrion (p.1864¹), † tax.,18716
latifolia (D.),18716
Archaeosigillaria (p.1863¹), † dist.,18716
Archegonium, (See *Gametophyte*.)
Archesporium, (See *Embryo sac*; *Microsporangium*; *Ovule*; *Pollen*, *Sporogenesis*; *Stamen*.)
Archidoria britannica, chem. comp. and acid-base balance,6824
Archilochus colubris, *Haemoproetus archilochus* from,3257
Archiplastidae (Algae), p.1860¹
Archytas (p.1878¹) *cirphas*, as parasite of army worm,3208
Arcidae (Mollusca), p.1872³
Aricidae (Annelida), p.1871²
Arcticocampus (p.1873²), n. spp.,8751
Arctidae (Lepidoptera), p.1877¹
Arctinae (Lepidoptera), p.1877¹
Arctodiaptomus (p.1873²), n. sp.,12324
Arctostaphylos (p.1881²),16016
pectinicornis, redescribed,6841
Arctonetta (p.1881²) *fischeri*, dist. in Europe,1644
Arctonotus (p.1871³), syn.,17962
Arctostaphylos (p.1866⁴), tax., (N)17475
 rooting of cuttings, plant hormones as affecting,13982
Arcyria (p.1861²) *denudata*, swarm cells, temp. as affecting,1085
Arcyriaceae (Myxomycetes), p.1861²
Ardea (p.1881³), food habits,9064
ardea, migration in, Great Britain,14305
cinerea, in Hungary,18064
 intestine histophysiology,4359
cinerea, bird banding,14296
herodias treganzai, swimming,5207
occidentalis, from Pennsylvania,5191
Ardeidae (Aves), p.1881¹ (See *Heron*.)
Ardeola bacchus, new sp. nematode from,10546
Ardisia (p.1866⁴), tax., 2882, 6429, 15510
Arca nut, alkaloids, effect on intestine,16810
Arca (p.1864⁴), tax.,10121, 15487
Arecoline, effect on:
 biliary and pancreatic papillae,13137
 intestine,16810
 urea in saliva, horse,14852
Argasidae (Arachnida), p.1874²
Argemone (p.1865²) *mexicana*, abnormal flowers in relation to morph. of gynoeceum,15521
Argentaffin cells, (See under *Digestive tract*.)
Arginine, detn. in presence of other amino acids,16379
 effect on insulin action,5792
 on metabolism, dog,10973
 as parent substance of urea in birds,9397
 prep. by enzymatic methods,5487
Argiope (p.1874²), n. sp.,3313
lobata, epigynum variation in,6860
Argiopidae (Arachnida), p.1874²
Argonometella, syn.,6348
Argon, respiratory resistance, oil-water solubility, and mental effects,11044
Argulidae (Crustacea), p.1873³
Arguloida (Crustacea), p.1873³
Argulus (p.1873³) *matini* on fish,16020
Argynnis (p.1876⁴), † genitalia,16042
Argyroleleus (p.1879²), tax.,3389
Argyropele leucocretata, control on orange,8689
Argyrotaenia (p.1877²) *curana*, life history and climatic relations,3172
 parasites,3172
Aridaea (p.1876²), n. sp.,10595
Aritidae (Pisces), p.1876²
Arion (p.1872²) *circumscriptus*, anatomy and new var.,5118
 bionomics and control on potato,12182
Arionidae (Mollusca), p.1872²
Aristida (p.1864⁵), in dung of ground sloth,7048
armata, *Placella* on,8407
 Arm., (See under *Lembo*.)
Armadiillidae (Crustacea), p.1873⁴
Armadiillum (p.1873⁴), n. spp., tax.,16021
 albinism,12328
nasatum, entoderm elements, origin and fate,9788
Armandia (p.1871³), sp. desc.,1608
Armenaca vulgaris (See also *Apricot*.)
Armigeres, as vector of filariasis,15968
Armillaria mellea, control by OS₂,17843
- Army, typhoid control in,15307
 Army worm, (See also *Cirphis unipuncta*.)
 bait for, variation of ingredients, 3215
 control, insect parasite, Hawaii, 3208
 fall, (See *Laphygma frugiperda*.)
 yellow-striped, control in California,3189
Arnica (p.1867²), n. sp.,1158
Arnicus (p.1876²), n. spp.,6875
 Aromatic acids, (See under *Acids*.)
Arrhopalites (p.1875²), n. sp. or var., 3371
Arrhytidia (p.1862²), n. sp.,4734
Arripidae (Pisces), p.1880¹
 Arrow poisons, in latex of *Calotropis*,15687
 of Philippines,1343
 Arrow root, (See *Maranta arundinacea*.)
 Arsenic, (See also *Arsenicals*; *Arsphenamine*; *Neorsphenamine*.)
 carcinogenesis and,7824
 compounds, arsenoxide, spirochaetocidal action as influenced by molecular O₂,17244
 by sulphydryl compounds,17245
 cerebro-spinal fluid trypanocidal after,2304
 chronic oral toxicity, rat, 4106, 4132
 effect on:
 relapsing-fever vs. *Trypanosoma rhodesiense*,13542
 spirochetes, factors affecting, 13178
 sugar metabolism,7792
 hydroxy-m-acetylaminophenylarsenic acid, excretion and toxicity,7808, 16814, 16815
 organic, tolerance to, animals, 14826
 in trichinosis therapy,8713
 phenylarsenoxides, toxicity,13178
 sodium arsenite, in filariasis therapy,3245
 in syphilis therapy, comparisons,17264
 in trichomoniasis, rat,542
 trypanocidal action,13178
 detn.,9117
 effect on:
 growth and reproduction, rat,3703
 liver arginase,3538
 Se toxicity,11239
 elementary, toxicity,7752
 leucemoid reaction to,13254
 poisoning, tissue injury in,9668
 by wallpaper, aspergillosis and penicilliosis vs.,13622
 relation to adenocarcinoma of ethmoid bone, sheep,13217
 in soil and plant extracts, detn., 17737
 storage in rats fed Ca arsenate and As trioxide,4144
 therapy in nutritional anemia,4256
 toxicity in soils, fixation as affecting,12111
 toxicity and storage, Ca and P as affecting, rats,3701
 trioxide, chronic oral toxicity, dog,4108
 use on soils, and toxicity,12108
 Arsenicals, (See also *Paris green*, etc.)
 Ca, for aphids on cotton,5028
 for cotton bollworm,5036, 10413
 for cotton boll weevil control,5031
 and flea hopper,5026
 for cucumber beetle,17871
 efficiency, particle size as affecting,12289
 of low sol., prep.,14146
 for potato flea beetle,5032
 toxicity to cotton worms,5075
 control of army worm,10465
 copper, basic, as insecticide,10472
 dusts, factors affecting insecticidal effectiveness,6712
 for grape moth, Europe,12174
 for grasshoppers,12287
 for gypsy moth control,14184
 for hemiptera on cotton, Ariz.,10407
 lead, for codling moth, substitutes and combinations,10397, 10398
 summary expts. in Kansas,10399
 efficiency, particle-size as affecting,12289
 effect of residue on oranges,8639
 for fall armyworm on maize,17878
 for flatheaded apple tree borer, 10391
 for Jap. beetle,12208
 with lime sulphur and wetting agents, chem. reactions,3211
 with nicotine, for codling moth,12175
 removal of residue, apple,14112
 spray residue, comp. apples,12176
 for strawberry, leafroller,10396
 for white grubs,10392
- for yellow-headed spruce sawfly,12209
 Na, effect on *Anabrus simplex*,17888
 to control bark beetles,14125
 Arsinilic acid derivatives, serological specificity,13447
 Arshphenamine, (See also *Neorsphenamine*; *Syphilis*.)
 effect on:
 blood picture,825
Spirochaeta pallida in vitro,817
 vit. C detn. in urine,7570
 exanthemata induced by,17242
 neutropenia produced by,2313
 spirochaetocidal action as influenced by molecular O₂,17244
 by sulphydryl compounds,17245
 in trypanosome infections,825
Artabotrys (p.1865²), n. spp.,15483
Artanema (p.1867³), spp., in Papua, 11895
 Arteri, Peter, biography,1683
Artemia salina, adaptations,3523
Artemisia (p.1867⁴), tax.,1158, 11888
 use as counterirritant, in tuberculosis treatment,1335
herba alba, pharm.,7762
tridentata, morphology and ecology,4808
 Arterenol, effect on heart-lung prep.,2292
 on iris sphincter,13155
 Arteries, (See under *Blood vessels*.)
 Arteriosclerosis, aortic, in rabbits,4088
 bundle branch block and, study,4093
 cerebral, effects,16952
 cholesterolemia and,489
 choline as affecting,499
 coronary, autopsy analysis,4068
 in diabetes,14776
 incidence in negroes,18134
 and occlusion,11167
 in depancreatized dogs,12643
 in diabetes, carbohydrate-high fat-low diet as affecting,269
 study,18101
 exptl., endocrine dysfunction and, 5859
 fat lesions of arteries and,16727
 heart failure in, temp. as affecting, 4057
 obliterans, papaverine as affecting,11186
 presenile, rôle in mental disorders,2415
 of pulmonary arteries, effect on lungs,7713
 of pulmonary valve, case,7709
 in sudden cardiac deaths,15122
 of superior vena cava, in heart failure,14761
 Arteritis, exptl., changes in lumbar sympathetic nerves and,14912
 poly-, nodosa, case history,7734
Arthonia (p.1862²), tax.,15473
Arthonopsis (p.1862²), n. spp.,10117
 Arthritis, (See also *Rheumatic fever*; *Rheumatism*.)
 acute suppurative streptococcal, chemotherapy,13551
 chronic, in man vs. animals,6234
 in wild vs. captive mammals,6234
 constitution and allergy,16902
 gold therapy, statistics,9938
 gonococcal, sulfanilamide therapy, 2658
 knee, in hemophilia, vit. C as affecting,14929
 lecithin soap as intestinal bactericide in,4563
 poly-, chronic, spinal fluid albumin in,16412
 etiology, in rat,15360
 infectious, exptl. colloidal gold therapy,9916
 of rats,9944
 ovine, relation to erysipelas in turkey,11751
 polymorphous diplococci and, hist.,4238
 rat, immunity to, after infection vs. hyperimmunization, 13406
 survival and temp. relations of organism,11681
 therapy by gold compounds,11582
 recovery of agent,16893
 purulent, in foal, *Salmonella typhimurium* var. *copenhagen* causing,8820
 rheumatism and, review, 9604, 14913
 rheumatoid, focal infection in,4610
 gastric acidity in,7507
 liver function in,11083
 scleromalacia perforans in,2385
 in three generations, man,1789

- Arthrobotrys oligospora*, culture, destruction of nematode larvae by, 14172
as parasite of plant-infesting nematodes,6642
- Arthrobotryum* (p.1863³) spongiosum,17489
- Arthrodira**, p.1878²
- ARTHROGRAPHIS** (Fungi) (p.1863⁴),11643
- Arthropoda** (p.1873³),12383
- † *Arthropleura*, phylogeny,12383
- Arthropoda* (p.1873³). (See also *Insects*; *Crustacea*; *Spiders*, etc.)
- antennal musculature,10577
- appendages, phylogenetic changes in distr.,1694
- circulatory mechanisms, physiology,16738
- as intermediate hosts to poultry nematode,10478
- parasitic, clinical discussion,3238
- of spruce fir forests, ecology,8998
- Arthrothamnus* (p.1860³) *bifidus*, sori development,8383
- Arthrorhaci* (Arthrodira), p.1878⁴
- Arthus phenomenon. (See also *Anaphylaxis*.)
- in anaphylaxis of monkey,6062
- in different stages of immunity,17162
- eserin as affecting,4500
- inhibition by antigen-antibody reaction,4493
- Artibeus planirostris trinitatus*, rabies transmitted to man by,9956
- Artichoke(s), globe. (See *Cynara scolymus*.)
- Artichoke(s), Jerusalem. (See *Helianthus tuberosus*.)
- Articulation(s). (See *Joints*.)
- Artifacts, of microlithic industry in Europe,9719
- with skeletal remains from cave in France,9727
- Artiodactyla (Mammalia), p.1883³
- dentine, structure,13307
- Artocarpus* (p.1865²), tax.,8870, 15505
- as food plant, Fiji,1241
- Arundinaria* (p.1864²), n. spp.,6387
- Arundinella* (p.1864²), n. comb.,8427
- Arvicaria abyssinicus rubescens*, *Ischnolaemus* from,17983
- Arvicole, exptl. echinococcosis in,12248
- Arytaina* (p.1875⁴) *hirsuta*,1631
- Asarkina* (p.1877⁴), n. sp.,6897
- Asbestosis, in textile mills, diagnosis,11371
- Asca* (p.1874⁴), n. sp.,12341
- Ascaridae (Nematoda), p.1870¹
- Ascaridata* (Nematoda), p.1870¹
- Ascaridia galli*, incidence, Scotland,6749
- lineata, as influenced by goblet cells of chick,6127
- Ascarids, from chimpanzee,15946
- Ascaris* (p.1870²), from monkey, distinct strain,15946
- in natives, Nigeria,8690
- nature of so-called sex chromosomes,7117
- columnaris*, in raccoon,17906
- equorum* eggs, recovery from x-rays, temp. and,14485
- in foals,17890
- lumbicoides*, in bile duct, *Ovis*,1566
- eggs, in mesentery, child,1566
- epidemiology, Florida,6742
- extract, enzymic activity,17891
- incidence, Cuba,6720
- respiratory infection in rodents, exptl. studies,14186
- urea excretion, digestive enzymes,15994
- megaloccephala*, extracts, toxicity,14177
- ovis*, from sheep,14179
- suis*, as influenced by phenol derivatives in vitro,17287
- vitulorum*, in calves, control,1562
- Ascarops strongylina*, control, swine, 17908
- Ascia rapae*, population on crucifers, 5045
- Ascidia* (p.1878³), tax.,6946
- Ascidian*(s), blood of prehistoric forms vanadium in bitumen derived from,14155
- as fouling organisms, ecology,10793
- Ascidella* (p.1878²) *aspera*, giant larvae, production and development, 9795
- Ascites*. (See also *Edema*.)
- fluid, blood changes after withdrawal in cirrhosis,7386
- dried, use in hemorrhagic shock,12643
- silica solubility in,5507
- transfusion with,7339
- prep. of universally compatible,17327
- myxedema and,4278
- Asclepiadaceae (Dicotyledones), p.1867¹
- Asclepias syriaca*, nicotine in root of, 12041
- Ascobolaceae (Fungi), p.1862¹
- Ascobolus* (p.1862¹) *geophilus*, heterothallism and segregation of sex factors,17485
- Ascochyta calicicola*, on *Meililotus*,1422
- pisi*, on peas, control by seed disinfection,8626
- Ascogaster* (p.1878²) *carpocapsae*, on peach moth larvae, with *Macrocentrus*,10456
- Ascomycetes (Fungi), p.1861³
- sexuality in *Perisporium*,13727
- Ascopera* (p.1878²), spp. occurrence and distribution,6946
- Ascorbic acid. (See *Vitamin C*.)
- Ascospore. (See under *Spore*.)
- Ascus, origin in *Perisporium*,13727
- Asellidae (Crustacea), p.1873⁴
- Asellota (Crustacea), p.1873⁴
- Asellus* (p.1873⁴), albinism,12328
- eye structure of blind spp.,5126
- flicker response, contour for,7631
- aquaticus*, thoracic legs, regeneration,11470
- hobbsi,12329
- Ash. (See also *Foliar diagnosis*; and under special constituents of ash.)
- analyses, drug plants,8562
- photoelectric colorimeter for,4953
- in herbaceous stems, distr. gradient,12114
- leaf-spot (*Phyllosticta*), general study,15471
- in leaves. (See also *Foliar diagnosis*.)
- tomatoes,8567
- in sugar cane, salt content of water as affecting,4835
- volcanic, as fertilizer,8482, 17576
- Ash patterns, of connective tissue,4365
- of epithelial muscle and nerve tissue, mammals and amphibia,4367
- of muscles,13811
- of salivary chromosomes, *Drosophila*,1695
- in study of senile psychotic path. changes,16939
- of woods of various spp.,8538
- Ash trees. (See also *Fraxinus*.)
- injury due to borers,3196
- Ashbya gossypii*, growth, use for testing biotin,6570
- Asiatic cholera. (See *Cholera*.)
- Asilidae (Diptera), p.1877²
- of Colorado, tax. and ecology,1622
- Asilus* (p.1877²), n. sp. (N),5150
- Asmara* (p.1875⁴), n. sp.,3366
- Asparagus, culture,1279
- cutting treatment as affecting,11982
- footrot (*Fusarium culmorum*),14050
- growth rate of stems, temp. as affecting,14002
- home-canned green, yellow deposit in nature and significance,17396
- rooting and sex ratio, age as affecting,13920
- rust (*Puccinia asparagi*), control by spraying,12154
- Asparagus beetle. (See *Crioceris asparagi*.)
- Aspen. (See *Poplar*; *Populus*.)
- Aspergilliosis. (See also *Aspergillus*.)
- of grasshoppers, temp. and humidity as affecting,10450
- arsenical wallpaper poisoning vs., 13622
- Aspergillus* (p.1862⁴), catalase activity in, heavy metals and pH as affecting,15779
- in fermentation of cigar-leaf tobacco,1030
- fumigatus*, in bovine abortion etiology,15364
- spinulosin produced by,8330
- toxin, properties and immunization to,9854
- virulence and serological comparisons of strains,17122
- niger*, acid formation by, iodoacetate and fluoride as affecting,11766
- deaminases in, specificity,10334
- gluconic acid production from glucose by, factors influencing,2725
- hydrolysis of soybean meal by, 17751
- N utilization, sources compared,12100
- respiration, temp. and age as influencing,8580
- viability of spores, ultra-violet as affecting,15755
- oryzae*, taka diastase of, effect on alpha and beta glycerophosphates,11762
- stellatus*, conidial stage of *Emercella*,15731
- from olive oil and olive cakes, 10035
- sydowi*, in diet, toxicity and correction,272
- terreus*, metabolic products, molecular constitution,11761
- Aspergillus* (p.1872²), n. sp.,6825
- Asperococcaceae (Algae), p.1860²
- Asperula* (p.1867²), n. sp.,8444
- Asphondylia* (p.1877²) *bursaria*, life history and descr. of gall on *Symplocos* due to,8606
- Asphyxia. (See also *Anoxemia*.)
- blood O₂ saturation curve in,8624
- effect on:
- blood oxidation and reduction, 10895
- blood pressure, children,13192
- blood vit. C content,3642
- heart and carotid sinus,7704
- nerve excitability,16702
- opsonizing capacity of blood, dog,7359
- reciprocal innervation of muscles,11145
- serum K,1956
- vasomotor system,16731
- ventricular elasticity, tortoise,7714
- in polychaetes, vital stain reduction gradients and,11467
- respiration and, book,11045
- spinal cord recovery from,3700
- studies,11046
- of tissues, shock due to,9140
- Aspiculurus* (p.1870²) *caviellae* (A. schulzi),17956
- ASPIDASPIS** (Hom.) (p.1875⁴),10605
- Aspidiotus* (p.1875⁴) *destructor*, biological control of,8669
- pyri*, development and epidemiology,17861
- Aspidium, bioassay, method,15695
- Aspidogastreae (Platyhelminthes), p.1869²
- Aspidosperma* (p.1866⁴), n. sp.,2867
- Aspirin. (See *Salicylic acid, acetyl-*.)
- Asplenium* (p.1863³), n. spp.,1097
- glandulosum*, new station for,1102
- Ass(es). (See *Equus*.)
- Assimilation. (See *Metabolism*; *Photosynthesis*.)
- Association(s). (See under *Communities*.)
- Association of Applied Biologists, history,7075
- Astacidae (Crustacea), p.1874²
- Astacin*. (See under *Pigments*.)
- Astacura* (Crustacea), p.1874²
- Astacus fluviatilis*, respiratory regulation,5605
- townsendi*, muscles, innervation,8063
- Astartidae (Mollusca), p.1872⁴
- Astasiidae (Protozoa), p.1868²
- Aster, China (*Callistephus*), yellows (virus), potato as host,3169
- yellows (virus), delphinium as host,17790
- Aster* (p.1867⁴), culture,11985
- genetics and cytology,6428
- selenium-tolerant spp.,10179
- Asteraceae (Dicotyledones), p.1867⁴
- Asteranthus* (p.1865⁵), n. spp.,15183
- Asterina* (p.1861⁴), n. spp.,8407, 17487
- asterina*,17498, 17500
- Asterinidae (Echinodermata), p.1871⁴
- Asterocalamitaceae (Pteridophyta), p.1863³
- Asterocalamites* (p.1863³), from Greenland, (Cb),3235
- Asterolepis (Echinodermata), p.1871⁴
- ASTEROLEMBRUS** (Crust.) (p.1874⁴),1616
- Asterolecanium* (p.1875⁴), n. sp.,14262
- Asterolepis* (p.1878²), from Greenland, (D),3235
- Asterozoa (Echinodermata), p.1871⁴
- Asterropteryx* (p.1880²), n. sp. from Hawaii,8815
- Asthenia, after adrenalectomy in toads,3821
- neurocirculatory, cardiodynamic studies,4067
- Asthma. (See also *Allergy*; *Anaphylaxis*; etc.)
- alveolar O₂ tension in,5607
- bilharzial bronchial, allergic nature,15149
- bronchial, vs. asthmatoïd heart failure,14771

- Asthma (continued)**
 bronchial (continued)
 bronchial occlusion causes in, 17138
 emotional component, 7907
 childhood, adrenal cortex as affecting, 13191
 cholesterol of serum in, 6028
 chronic, oil soln. of epinephrine in, 16799
 diagnosis and treatment, 11042
 due to:
 beet pollen and seed dust, 6047
 May fly, 6088
 mushroom fly, sensitization, 6059
 phthalic anhydride sensitization, 13443
 eosinophile counts in, 13256
 epinephrine reactions in, 15132
 exptl., 17191
 infectious, therapy by filtrates of respiratory-tract pathogens, 13491
 mortality in relation to climatic and socio-economic factors, 6209
 path. and therapy, 17154
 review, 13417
 sulfur dioxide poisoning and, 13282
 therapy, by epinephrine percutaneously, 14783
 x-ray, 17172
 Astigmatism, corneal and total, 13061
 statistical analysis, children, 2340
 Astomina (Protozoa), p.1868³
 Astomina (p.1863²), n. sp., 4748
 Astragalus (p.1865⁴), tax., 8442, 11894
 as indicator of Se, 10179, 10776
 racemosus, Se as essential element for, 17734
 Astratum (p.1872¹) *kendengense* (Pl.), 16010
strictipes (p.1872²) *manni*, cell surface during cleavage, 4397
Astrocarum (p.1864⁴) *alatum*, from Costa Rica, 13746
ASTROMEREMIA (Dicot.) (p.1867²), 10148
Astronidium (p.1866³), n. sp., 6431
Astyanax (p.1879²), new spp. from Panama, 1637
 spawning induced by pituitary extracts, 5895
Astylus (p.1876²) *atromaculatus*, damage to cotton, life hist., 6699
 Asymmetry. (See also *Handedness*)
 lateral, in birds, 7113
 in organisms, biophysics, 10676
Asymphyllodora (p.1869⁴) *japonica*, 6803
Asyndetus (p.1877⁴), n. sp., 14256
 Atabrin, effect on:
 avian malaria, 11209, 13178
 liver and kidney, 7754
Plasmodium, 15210
 penguins, 12265
 in giardiasis therapy, 6141, 6715
 in malaria prophylaxis, 13553
 in malaria therapy, 6144, 8187
 9930, 13535
 in African natives vs. whites, 8188
 clinical data, 9939
 musonot, in malaria, quinine bihydrochloride compared, 4560
 poisoning, histopath., 7784
 storage in *Plasmodium* spp., fluorescent-microscope study, 11575
 therapy, blackwater fever after, 6727
Atarba (p.1877²), n. sp., 14251
 Ataxia, in cattle and foxes, vitamin relations, 2692
 Atelectasis, allergy rôle in, children, 17138
 massive, spontaneous pneumothorax and, 3777
Ateles daniensis, new host for *Protophysa* (nematode), 15955
 geoffroyi, reproductive cycle, 9415
Athena (p.1876⁴) *petreus*, larval and pupal stages, 3357
Athenaea (p.1867²), n. sp., 2382
Athene cuculoides, n. gen. trematode from, 10546
Athericera (Diptera), p.1877⁴
Atherinidae (Pisces), p.1879⁴
ATHESON (Hom.) (p.1875²), n. sp., 8785
Atheta (p.1876⁴), n. sp., 6866
 Athlete(s). (See also *Exercise*; *Fatigue*; *Work*)
 cysticercosis in, 6726
 Athletics. (See *Athletes*; *Exercise*; *Training*)
Athrotrema (p.1867²), n. spp., 15483
Athrotrema, embryogeny compared with *Sequoia*, 10163
Athyridae (Brachiopoda), p.1871³
Athyrium (p.1868²), n. spp., 1097, 8421
 Atichaceae, taxonomy, 13733
 Atmometer, calibration vs. environmental factors, 3490
 critical evaluation, 8992
 cup, method of recording evaporation, 10753
 Livingstone-Radio, as light measuring instrument, 8986
 Atmosphere; (See also *Air*; *Alpine*; *Altitude*; *Humidity*; *Mountain*; *Nitrogen*; *Oxygen*)
 effect on intensity fluctuations in components of solar radiation, 16246
 internal, of potatoes, factors affecting, 10326
 pressure, adaptation of swimbladder to, 5604
 effect on:
 anesthesia, 11214
 cerebrospinal pressure, 7705
 ciliary frequency, cardiac rhythm and muscle contraction, 14750
Mytilus, 479
 heart, 1063
 trypanosomes, 1063
 high, effect on:
 blood coagulation, 16404
 muscle metabolic processes, 16709
 smooth muscle, O₂ as affecting, 12643
 low, acclimatization to, dog, 7531
 effect on:
 bar-eyed in *Drosophila*, 1776
 blood lipids, 16420
 gastric secretion, dog, 7513
 liver glycogen, 10903
 in relation to respiratory infections, 8988
 radio-sounding balloons, use in detn. of meteorological conditions, 1110
 Atony. (See *Muscle, tonus*)
 Atopen(s). (See *Allergen*; *Allergy*; *Sensitization*)
 Atophan. (See *Cinchophen*)
ATOPOCARPUS (Monocot.) (p.1864⁴), new subg. of *Paralinospadix*, 11864
Atopochilus (p.1879²), n. sp., 6968
 Atopy. (See *Allergy*)
Atractomorpha (p.1875²), n. sp., 3366
Atriplex (p.1865²), n. sp., 4763
 in dung of ground sloth, 7048
 selenium-tolerant spp., 10179
halimus, root system, 10780
 nitens, nitrate storage, 116
Atropa belladonna. (See also *Atropin*; *Belladonna*)
 atropin content, place of growth as affecting, 6551
 Atrophy. (See also *Dystrophy*)
 of cremaster muscle, 14748
 hepatic, 12917
 Atropine. (See also *Atropa belladonna*; *Belladonna*)
 action, factors affecting, 13178
 in belladonna, place of growth as affecting, 6551
 bioassay, 222
 citrate, as a mitotic, 14846
 detoxification in organism, 4180
 effect on:
 biliary and pancreatic papillae, rabbit, 13137
 bronchi, 2250
 cardiac action of epinephrine, rabbit, 7736
 cardiac rhythm, 5749
 central heat production, 11221
 central nervous system, 5769
 circulation time, 9528
 colon secretion, 363
 corneal sensitivity, 2210
 creatin-creatinin output, 13021
 diphtheria toxin action on heart, 16809
 enucleated frog eye, 13176
 epinephrine effect on skin blood-flow, 16732
 heart, 14655
 in grasshopper, 4115
 in sympathetomized dogs, rôle of vagus in, 11075
 iris muscle, 4045
 iris sphincter, 13155
 kidney function, 13161
 leucocyte formation, 11213
 lung blood vessels, frog, 9574
 male genitalia, 16622, 16623
 mecholy effect on heart, 11168
 melanophores in fish scales, 14663
 myotonic muscle, 2312, 11231
 pilocarpine action on O₂ consumption at low temp., rat, 16770
 plasma loss in guanidine poisoning, 7785, 7786
 potassium action on blood pressure, 9077
 pulmonary dead space, 3774
 renal blood flow and clearance, 11086
 salivary gland metabolism, 7748
 splanchnic control of pancreas, 16685
 sympathetic ganglia, 4139
 tail raising reaction of morphine mice, 13162
 thiobarbital action on heart, 5775
 intracysternal application, 5775
 methyl nitrate, in pyloric stenosis, man, 16817
 mydriatic action after sympathectomy, 5771
 poisoning and treatment, children, 16798
 salts, effect on eye, 14846, 14847
 synergism with barbiturates and strychnine, 5769
 tissue hydrolysis, 2286
 Atropsis, dist. in relation to soil suction force, 12582
Atta (p.1878⁴) *texana*, myrmecophile spp. of, nest ecology, and control, 3354
Attalea gomphococca, oil, carotene content and vit. A potency, 10332
Attalus (p.1876²), n. sp., 3332
Attomastreptus (p.1873²) *costatus*, 16013
Attheyella (p.1873²), n. sp., 8751
 Attitude reflexes. (See *Posture*)
 Attrahent(s). (See *Baits*)
 † *Aturia* (p.1872⁴), illustrated, 5119, 5120
Aturus (p.1874²), n. sp., 10583
Atya (p.1874²), emended, descript., 12326
 Atyidae (Crustacea), p.1874²
ATYPONEMERTES (Nemert.) (p.1870⁴) *herschelti*, 12304
 Atzler, Edgar, biography, 8890
 Audiometry, apparatus and study, 1946
 Audition. (See *Hearing*)
 Auditory apparatus. (See *Ear*; *Hearing*)
 Auditory nerve. (See *Nerve, auditory*)
 Anjeszky's disease. (See *Pseudorabies*)
Aulacophyllum (p.1869²) (D), n. sp., (D), 10535
Aulana (p.1877²), n. sp., 6901
Aulosira (p.1860²), n. sp., 2789
Aulostomi (Pisces), p.1879⁴
 Aurantioidae (Dicotyledones), p.1866⁴
Aurantiporus (p.1862²), new comb., 6358
Aurelia (p.1869²) *aurita*, sensory pit histology, 10593
 Auricle. (See under *Heart*)
Auricularia (p.1872⁴) *bermudensis*, 16004
Auriculariaceae (Fungi), p.1862²
 Aurocein, in arthritis therapy, statistics, 9938
 Aurochs. (See *Bison*)
 Australian Q-fever, compared to tick-transmitted Montana infection, 17285
AUSTROAGALLOIDIDAE (Homopt.), (p.1875²), 18017
Austroiceles jungh, n. spp., dipterous parasites, 6898
Austrostrongylus (p.1870²) *minutus*, from *Macropus*, 14214
AUSTROXYRIS (Nemath.) (p.1870²) *finlaysoni*, 14214
 Autacoid. (See *Hormone*)
 Autoagglutination, polemic, 895
 Autocatalysis, of alien proteins (?), 15240
 Autogamy. (See *Fertilization, self*; *Pollination*)
Autographa brassicae, population on crucifers, 5045
 Autohemagglutinins. (See *Agglutinins*; *Blood groups*; *Hemagglutinins*)
 Autohemorrhagia. (See *Bleeding, reflex*)
 Autointoxication. (See under *Intoxication*; *Toxemia*)
 Autolysin. (See *Hemolysin*; *Lysins*; and other specific lysins; etc.)
 Autolysis. (See also *Bacteriophage*; *Bacteriolysis*)
 of diseased spleens, 11311
 of leucocytes and lymphocytes in buffer mixtures, 250
 tissue, in leucemia vs. carcinoma, 9586
Autolytus edwardsi, regeneration, internal factor controlling, 2183
Automeris io, supernumerary wings, 16044
 Automobiles, wildlife destruction by, 10817
 Autonomic nervous system. (See *Nerve, splanchnic, vagus*, etc.; and *Nervous system, autonomic, sympathetic, and parasympathetic*)
 Autopsy. (See also *Cadaver*; *Death*)
 post-mortem, rectal feces collection for, 13646
 tuberculosis serodiagnosis in, 812
 Autotrophism. (See *Photosynthesis*)
 Auximones. (See under *Growth, accelerators*; *Vitamins*)
 Auxin(s). (See under *Hormones, plant*)

Avena (p.1864²). (See also *Oats*.)

- n. syn.,1158
 attempts at hybridization of spp.,12580
 carboxylase and coenzyme, activity in germination,10385
 cells, as affected by acenaphthene,16159
 cell wall of coleoptile, structure and development,17705
 growth of coleoptiles, relation to auxin translocation,1356
 straight and curved growth of coleoptile, various compounds as affecting,17678
 structure coleoptile cell wall,6445
 tropisms in, relation to auxin,1358
sativa gigantea-*A. fatua* hybrids, aberrant leaf width in, cytology5292
Avenex, paper milk-bottle treatment with, to prevent off flavor in milk, 17412
 Avertin. (See *Tri bromethanol*.)
 Aves (p.1881³). (See *Birds*.)
 Aviation, instruments, and research techniques, book,12567
 in relation to meteorology of Atlantic,14385
 Aviculture. (See *Birds*.)
 Avitaminosis. (See specific deficiency diseases, e.g., *Beri beri*, *Rickets*; and under *Vitamins*.)
 Avocado. (See also *Persea*.)
 culture, pH as affecting,15595
 dichogamy and pollination,1249
 Mexican and Guatemalan, bark characters,15597
 seedling and tree size, seed size as affecting,15598
 storage, factors affecting,18915
 sun blotch, in Florida,12138
 tongue-inarching, advantages,11994
 variety tests, Calif.,8515
 Axial gradient(s). (See *Gradients*; *Growth*; *Morphogenesis*; *Polarity*.)
 Axis, anomalous, secondary growth in *Bauhinia*,8449
 Axolotl. (See also *Ambystoma*; *Salamander*(s).)
 liver, acidophil lining of bile capillaries,7981
 pigmentary physiology, nerve control,5652
 tissue changes induced by organizing substances,17051
 Axone. (See under *Nerve*, *fibers*; *Nerve cells*.)
Axonopus affinis, seed germination and viability, temp. and storage as affecting,11957
 Ayerza's disease, etiology and pathology,631
Azadirachta (p.1866²) *indica*, in fuelwood plantations,12013
 germination,12005
 introduction into Sudan,10282
Azalea(s), rooting of cuttings, auxins as affecting,1361
Azima (p.1866⁴) *sarmentosa*, embryogeny and relationships,4806
Azolla (p.1863³), distribution,1100
 (Pl.), in Holland,8422
pinnata, develop ♀ thallus,4759
Azotobacter (p.1861¹). (See also *Nitrogen fixation*.)
 extracellular N in cultures of spp., nature, amount, and factors affecting,17426
 fertilization of citrus orchard soils as affecting,17442
 in soils, abundance as affected by benzoic acid compounds,17433
 factors affecting,3345
chroococcum, auxin effects on growth and N fixation,4702
 N fixation by, alone vs. symbiotically,17434
 as influenced by agar and trace elements,17422
 by iron and Mo,10070
 polysaccharides produced by,10072
indicum, from acid soils,10072
 growth, media and reaction as affecting,17438
vinelandii, N fixation by, agar and trace elements as affecting,17422
 pigment production by, trace elements and,17422
 Azotobacteriaceae (Bacteria), p.1861¹
 Azotoluene, in production of lung tumors, mice,16831
 2-amino-5-, relation to hepatomas and vit. A,11286
 Azulene, anti-inflammatory action,16781

B

- Babesia* (p.1869²). (See also *Piroplasmiasis*.)
 in squirrel,6769
bigemina, nuclear structure,3268
canis, in dogs,14182
Babesi (p.1869²) *bovis*, in domestic cattle,8719
major, in cattle,1546
ovis, in sheep,8719
perroncitoli, in pigs,12246
Babesiidae (Protozoa), p.1869²
 in sheep and cattle,8719
 Baboon. (See also *Papio*.)
 exptl. inclusion blennorrhoea in,4594
 feeding behavior,12447
 syphilis in,13395
Baccha (p.1877⁴), n. spp.,6895, 6897
Baccharis (p.1867⁴), n. sp.,6437
 BACCHARISPHTLA (Col.) (p.1876³)
 benoisti,8769
Bacciger (p.1869⁴) *harengulæ*,6803
 Bacillaceae (Bacteria), p.1861¹
 Bacillariophyceae (Algae), p.1860³
 Bacillary white diarrhea. (See *Salmonella pullorum*.)
 Bacillus(i). (See *Bacteria*; and under genera of bacteria, e.g., *Bacillus*.)
 avian tubercle. (See *Mycobacterium avium*.)
 Bang's. (See *Brucella abortus*.)
 Bordet and Gengou. (See *Hemophilus pertussis*.)
 Bruce's. (See *Brucella*.)
 of Calmette-Guérin. (See also *Mycobacterium tuberculosis*.)
 dissociation,13700
 immunization by, calves,11569
 by killed paraffin-coated tubercle bacilli vs.,15158
 by killed tubercle bacilli vs.,11532
 reinfection in allergic and iatrogenic state after,8102
 single vs. fractional doses,13433
 tuberculin allergy and immunity after repeated conjunctival-sac applications,17220
 tuberculosis vaccination by,17196
 multiple-puncture method,13473
 colon. (See *Escherichia coli*.)
 Danysz. (See *Salmonella enteritidis*.)
 diphtheria. (See *Corynebacterium diphtheriae*.)
 diphtheroid, avian tubercle bacteria in apparently pure cultures, 11639
 polysaccharides, serological comparisons,9898
 Döderlein, in vagina, pH and,428
 Ducrey. (See *Hemophilus ducreyi*.)
 Duval's. (See *Shigella sonnei*.)
 dysentery. (See *Shigella* spp.)
 Eberth's. (See *Eberthella typhosa*.)
 Flexner's. (See *Shigella paradyenteriae*.)
 of fowl cholera. (See *Pasteurella avicola*.)
 Fraenkel's. (See *Clostridium perfringens*.)
 Friedländer's. (See *Klebsiella pneumoniae*.)
 Fritsch rhinoscleroma. (See *Klebsiella rhinoscleromatis*.)
 fusiform, aerobic strains,4715
 Gaertner's. (See *Salmonella enteritidis*.)
 Hansen's. (See *Mycobacterium leprae*.)
 of hog-cholera. (See *Salmonella choleraesuis*.)
 influenza. (See *Hemophilus influenzae*.)
 John's. (See *Mycobacterium paratuberculosis*.)
 Koch's. (See *Mycobacterium tuberculosis*.)
 Koch-Weeks. (See *Hemophilus influenzae*.)
 Loeffler's. (See *Corynebacterium diphtheriae*.)
 Morax-Axenfeld. (See *Hemophilus ducreyi*.)
 Morgan's. (See *Proteus morganii*.)
 Moro's acidophilic. (See *Lactobacillus acidophilus*.)
 mouse-typhoid. (See *Salmonella typhimurium*.)
 Novy's. (See *Clostridium novyi*.)
 paracolon, intradermal, agglutinability and in vitro tests for, in chronic infections,11653
 in vaginitis of cat,11727
 para-"rauschbrand", serological comparison of strains,940
 paratyphoid. (See *Salmonella* spp.)
 Pfeiffer's. (See *Hemophilus influenzae*.)
 Plaut's. (See *Fusobacterium plauti-vincentii*.)
 Preisz-Nocard. (See *Corynebacterium ovis*.)
 pseudo-diphtheria, differential media for,17349

Bacillus (continued)

- pseudo-dysentery, biological characters of strains from same case, 17301
 Shiga's. (See *Shigella dysenteriae*.)
 Sonne. (See *Shigella sonnei*.)
 Stefansky's, handcoot infected by,17372
 inoculations in rats,4654
 ultraviolet as affecting,17380
 swine-erysipelas. (See *Erysipelothrix rhusiopathiae*.)
 of symptomatic anthrax. (See *Clostridium chauvoei*.)
 timothy hay. (See *Mycobacterium phlei*.)
 typhoid. (See *Eberthella typhosa*.)
 Vincent's. (See *Fusobacterium plauti-vincentii*.)
 Welch. (See *Clostridium perfringens*.)
 Yersin's. (See *Pasteurella pestis*.)
 Bacillus (p.1861¹), black pigment production by, cultural requirements for,6300
 glucose dissimilation by,17453
 abortus. (See *Brucella a.*)
 acidophilus. (See also *Lactobacillus a.*)
 in feces of dyspeptic breast fed infants,17304
 aerogenes. (See *Aerobacter a.*)
 capsulatus. (See *Clostridium perfringens*.)
 aertrycke. (See *Salmonella typhimurium*.)
 alkalescens. (See *Shigella a.*)
 alvei. (See also *Bacillus plauti*.)
 motion of colonies, cinematographic analysis,1062
 amylovorus. (See *Erwinia amylovora*.)
 anthracis. (See also *Anthrax*.)
 antigens, capsular and somatic, 2565
 antisera, reactions of antipapular immune body in,851
 antitoxins, to capsule substance, production,919
 capsule, antigenicity of polysaccharide,919
 hemolytic action vs. virulence,8222
 nutrition, amino-acid interrelationships in,15414
 phagocytosis mechanism,9882
 variability and dissociation in single-cell strains,10094
 variation in colony form,6321
 viability in stagnant water,2706
 atterimus. (See also *Bacillus mesentericus*.)
 black pigment production by, cultural requirements for,6300
 synonymy,6300
 avisepticus. (See *Pasteurella avicola*.)
 azoticus,4708
 botulinus. (See *Clostridium botulinum*.)
 brassicae, growth factors for,17470
 bronchisepticus. (See also *Brucella bronchiseptica*.)
 comparison to *B. pertussis*,17320
 fate after intraven. inoculation,13500
 immunization to exp. infection, 13499
13500
 pathogenesis as influenced by exp. infection route, 13499, 13500
bulgaricus, vit.-C synthesis by,2734
butyricus. (See *Clostridium butyricum*.)
campestris. (See *Phytomonas c.*)
carotovorus. (See also *Erwinia carotovora*.)
 on cauliflower, Ceylon,13876
cereus, effect on endomixis, *Paramecium*,12280
chauvoei. (See *Clostridium chauvoei*.)
cholerae-gallinarum. (See *Pasteurella avicola*.)
cholerae-suum. (See *Salmonella choleraesuis*.)
cloacae. (See *Aerobacter c.*)
coli. (See also *Escherichia c.*)
 comparisons of intradermal agglutinability and in vitro tests for, in chronic infections,11653
 effect on endomixis, *Paramecium*,12280
 estimation by dilution method,1005
 in harbor sea water,17473
 sulfapyridine and sulfanilamide in vitro as affecting,9931
communior. (See *Escherichia communior*.)
communis, chenodesoxycholic acid synthesis from dehydrochenodesoxycholic acid by,13711
corallinus, from cheese,15423
delbrückii, hydrogenation by mechanism,15426
diphtheriae. (See *Corynebacterium d.*)
dulcitolfermentans,4708
dysenteriae. (See also *Shigella d.*; *S. paradyenteriae*.)

Bacillus (continued)
dysenteriae (continued)
 isolation technique,2641
 Sonne type, strains in dysentery epidemic,17290
enteritidis. (See also *Salmonella* spp.)
 mouse populations infected by, rôle of inborn resistance factors in,18659
 Breslau, incidence in meat,4682
 Gaertner, enzootic encephalitis of silver foxes due to,4683
 incidence in meat,4682
 Jena, incidence in meat,4682
erysipelas suis. (See *Erysipelothrix rhusiopathiae*.)
flemeri. (See also *Shigella paradyenteriae*.)
gallinarum (See *Shigella g.*)
 glycinophilus, growth as influenced by Fe compounds,6314
histolyticus. (See also *Clostridium histolyticum*.)
 toxin, vit. C as affecting,6029
influenzae. (See also *Hemophilus i.*)
 in bronchopneumonia,8220
inulofugus,4708
lactis-acidi. (See also *Lactobacillus l.*)
 growth factors for,17470
lactis aerogenes. (See *Aerobacter a.*)
 larvae. (See *Achromobacter l.*)
 leprae. (See *Mycobacterium l.*)
 megatherium. (See also *Bacillus brassicae*.)
 peptidase,2749
 variant cells, formation and fate,13701
melitensis. (See *Brucella m.*)
mesentericus. (See *Bacillus atterimus; B. niger; B. nigricans.*)
morganii. (See *Proteus morganii*.)
mucosus capsulatus. (See *Klebsiella pneumoniae*.)
mycoides. (See also *Bacillus brassicae*.)
 metabolism of dextral vs. sinistral forms,17454
 proteinases,15424
niger, black pigment production by, cultural requirements for,6800
 effect on endomixis, *Paramecium*,12280
 pigment formation by,17437
nigricans, synonymous with *B. atterimus*,6800
nonpentosus,4708
oedematis, toxin, vit. C as affecting,6029
oedematis sporogenes. (See *Clostridium bifermentans*.)
paradyenteriae. (See *Shigella p.*)
paratyphosus. (See also *Paratyphoid group of bacteria, Salmonella spp.*)
B. (See *Salmonella typhimurium*.)
C. (See *Salmonella hirschfeldii*.)
perfringens. (See also *Clostridium p.*)
 anti-group enzymes,6063
 blood-group A and B antigens in saliva destroyed by,6118
 classification of closely related bacilli and,1054
 hemolysin, ultrafiltration,18480
pertussis. (See also *Hemophilus p.*)
 vaccine, prep. and clinical use,9901
pestis. (See also *Pasteurella p.*)
 envelope fractions, specificity of antiserum reactions with,18440
18441
 precipitins, specificity, 18440, 18441
pleofructi. (See *Leuconostoc mesenteroides*.)
pluton. (See also *Bacillus alvei*.)
 in bee larvae, hist.,15939
 culture and localization in bee larvae,1587
pneumoniae. (See *Klebsiella p.*)
prodigiosus. (See also *Serratia marcescens*.)
 ascorbic acid production from d-xylose, etc.,4705
 carbohydrate relations,4705
 effect on endomixis, *Paramecium*,12280
 inhibition by xylose,4713
proteus. (See also *Proteus vulgaris*.)
 nicotinic acid test for,16518
 peritonitis due to, sulfonamide therapy,4555
 sulphanilamide as affecting,8182
 urea decomp. by,13713
pseudotuberculosis. (See *Corynebacterium p.*)
pseudotuberculosis muris, immunization to,13488
 infection as influenced by inoculation route,13488

Bacillus (continued)
pseudotuberculosis (continued)
 ovis. (See *Corynebacterium ovis*.)
 rodentium, duration of viability and activity,11799
psittacosis. (See *Salmonella typhimurium*.)
pullorum. (See *Salmonella p.*)
pyocyaneus. (See also *Pseudomonas aeruginosa*.)
 peritonitis due to, sulfonamide therapy,4555
 toxicity of neutralized by plant growth,8624
pyogenes. (See also *Corynebacterium p.*)
 in bovine abortion etiology,15364
radicicola. (See also *Rhizobium leguminosarum*.)
 inoculation of *Robinia pseudoacacia* with,6528, 6529
radiobacter, growth substance from,3169
rhamnoticus,4708
rhusiopathiae. (See *Erysipelothrix r.*)
rodens, infections in hares and rabbits,6243
salmonicida, pathogenicity and serological relations of S, R and G phases of strains,13696
schottmülleri. (See *Salmonella schottmülleri*.)
septicus. (See *Clostridium septicum*.)
silvaticus, economic coefficient,6313
simplex, antagonism of R-strain to *Rhizoctonia solani*,6293
sordelli. (See also *Clostridium bifermentans*.)
 toxin, production compared to others of group,15268
sphaericus, isolated from sterilized ligatures,11800
subtilis, bacteriophage, aging as affecting,13571
 potato pigment formation in,1430
suipestifer. (See *Salmonella choleraesuis*.)
tetani. (See *Clostridium t.*)
tuberculosis. (See *Mycobacterium t.*)
tularensis. (See *Pasteurella t.*)
typhi-gallinarum. (See also *Shigella g.*)
 receptor analysis,4523
typhosus. (See also *Eberthella typhosa*.)
 as affected by maggot washings (*Calliphora* and *Cynomya*),12216
tyrosinogenes, synonymous with *B. atterimus*,6800
violaceus sartoryi, from dental pus but nonpathogenic,4719
 pigment, chem.,4719
welchii. (See also *Clostridium perfringens*.)
 classification of closely related bacilli and,1054
 trilactic acid as affecting,2653
whitmorei, bronchiostenosis after melioidosis due to,11631
 Bacon. (See under *Meat*.)
 Bacteria (p.1861). (See also *Bacillus(i); Bacteriological technic; Bacteriology; Microbiology; Microorganisms; etc.; and under genera*.)
 acetic acid. (See also *Acetobacter*.)
 acid-alcohol-fast form from water, 2746
 acid-alcohol fastness, significance,18600
 acid-fast. (See also *Mycobacterium*.)
 antiformin and acid-resistance of pathogenic vs. saprophytic,8277
 chem. comp. and factors affecting,11791
 culture, by Clegg's symbiont amoeba method,8258
 pathologic effect of association with attenuated and avirulent tubercle bacilli,6175
 precipitins for tuberculin proteins,9870
 susceptibility of golden hamster to,17297
 of vole to,17298
 acid-fast vole, animal susceptibility to,17297, 17298
 acidophyllic, of mouth, as influenced by lysozyme and inhibin of saliva,907
 acid-resistant, pH and,6272
 from acidulated brine, pH and,6272
 aciduric, trilactic acid favoring intestinal,2653
 agglutinations by, photometric measurement,842
 air-borne, sampling device for,10018
 air content in rooms,2681
 air filters for, test method,10010

Bacteria (continued)
 anaerobic. (See also *Anaerobiosis; Metabolism (tissue and cellular); Respiration, plant; etc.*)
 ascorbic acid as affecting,17465
 culture, apparatus for,17350
 oxygen indicator in "ring plates" for,8272
 value of routine,17351
 intestinal, temp. relations,17462
 lysozymic lysates, specificity and toxicity,878
 in nature and disease, book,10086
 poisoning by strain in sausage, 18618
 solid media for, detn. of suitability,11673
 in surgical infections, chemotherapy by sulphonamide compounds,4553
 viability in old canned foods,2733
 anaerobic sporiferous, serological relations,2767
 steam sterilization technic,2765
 antagonisms, *Bac. simplex* to *Rhizoctonia solani*,6293
 anthocyanin occurrence (?) in,2758
 antigens, purification,17183
 attacking June-beetle larvae,15906
 bacteriophage absorption by,6159
 bacteriophage relations. (See *Bacteriophages*.)
 bacteriostatic action of Na lauryl sulphate on gram- vs. gram+,4648
 biology, textbook,11795
 in blood. (See *Bacteriemia*.)
 butyric-acid anaerobic, spoilage of acid canned foods by,18677
 of caecum of horse,4671
 cantharides blaster for detecting, 18625
 capsulated, staphylococci antagonistic to,11803
 capsules, effect on phagocytosis,9873
 invasiveness rôle,4474
 in carious teeth,960
 cellulose-decomposing spp.,1033
 effect on cotton fibers,11765
 from chronic infections, differentiation,17826
 cold-storage of food and,10041
 colony development, factors in,10084
 colony motion, cinematographic analysis,1062
 colony variations, factors in,13710
 counts, test-tube method,17342
 creatinine production by, precursors to,6305
 culture collection,1052
 cultures. (See also *Bacteriological technic; Culture media*.)
 hydrogen peroxide detn. in,11798
 senescent phase of aging, mechanisms,17471
 cytology,2773
 decomp. of plant materials by, P transformations in,17423
 densities associated with euglenae populations, growth in cultures,7187
 in desert soils,17424
 diseases due to, chemotherapy, book,9917
 in wild animals,6249
 disintegration, mechanical,17168
 dissociation. (See also *Bacteriophage; Dissociation, microbic*.)
 taxonomic significance,17468
 dissociative rates, x-rays as affecting,17456
 economic coefficients,6313
 effect on ascorbic acid oxidation, 17400
 on endomixis in *Paramecium*, 12280
 endotoxins, resistance to, chemotherapy and,6142
 enteric, differential medium for,8275
 effect on tumors, rats,4196
 lecithin-soap therapy,4563
 lipids,6325
 media for,10076
 enzymes formed by,190, 191, 192
 effect on tubercle bacillus growth,8235
 fermentation. (See also under *Fermentation*; and specific organisms.)
 of cigar-leaf tobacco,1030
 fevers induced by, heterobacteria as affecting,882, 883
 filamentous, of mouth,17446
 filterable forms. (See *Filterable forms; Viruses*.)
 filters for, filtration technic and,9997
 pore diameter, detn.,15419
 filtrates. (See *Antivirus, Filtrates, bacterial*.)
 in fish (normal),4695

SUBJECT INDEX

Bacteria-Bactericidal action

Bacteria (continued)

flagella, demonstration,15418
 staining,11668, 17469
 as routine test,2753
 food-poisoning (non-specific) by, 15352
 meat inspection for,4682
 fractionation of extracts by sonic vibration,13418
 fresh-water forms,2764
 gas-, serological differentiation of strains,877
 therapy of infections,15347
 genesis from lifeless matter (?), 10081
 gram-negative, photodynamic action of safranin on,2687
 serological relations to *Brucella*,11802
 gram-negative phytopathogenic, systematic position and taxonomy,15413
 gram positive, bactericidal agent from soil bacillus as affecting,13694
13695
 growth, as influenced by:
 amount of medium,8366
 carbon in media,11801
 factors from yeast and malt, 1059
 iron compounds,6314
 pectin,4663
 limiting factors,6307
 phases, effect on adaptive enzyme formation,6306
 in soil, moisture changes as affecting,1047
 growth factors for,6311, 6312
17470, 17472, 17474
 in blood serum,10088
 chlorophyllan as,6326
 lipid, for tubercle bacillus,6298
 nicotinic acid as,4712, 6318
 pantothenic acid as,6318
 review,17458
 from yeast and malt,1059
 growth regulators for,2780, 4714
 heteroauxin, effect on *Escherichia coli*,2747
 halophilic, in bacon curing brine, 11763
 in harbor sea water,17473
 hetero-, effect on bacterially induced fevers,882, 883
 heterotrophic, in bottom deposits of lakes,8357
 histamine in cultures, extraction and identification,6303
 factors affecting,6304
 hormones produced by, amino acids as affecting,13981
 hydrogen bisulphide formation by, silverfoil as indicator for, 4664
 hydrogenation by, mechanism,15426
 in ice cream, estimation,1042
 immunization to, hist. changes during,4492
 as indicator in flocculation test for malaria,6753
 industrial applications,15399
 infections by, chemotherapy,4577
 mechanism,4492
 urticaria induced by,6055
 as influenced by:
 antigens from blowfly larvae,12216
 auxins,2780
 horse-radish vapors,2724
 lecithin-broth culture,17305
 lungs,8773
 sulfonamide compounds,4550, 4577
 ultraviolet light,4717
 infra-, stain technic for,11618
 intestinal. (See under *Intestine*.)
 intoxication by, lipids in tissues and,13405
 invasiveness, capsular substance rôle in,4474
 regulated by inflammation,2383
 iron-, thick-sheathed form,15408
 Klieneberger's L-organism, nature and significance,2756
 labile antirens,13456
 lactic acid. (See also *Lactobacillus*.)
 in acidified green fodder silage, 17398
 growth factors for, 4714, 6318, 17470
 kefir powder and "Kefemon" as affecting,4700
 in lakes, distr.,10091
 legume. (See *Rhizobium leguminosarum*.)
 in leucemias,18255
 mannitic, effect on wine,10089
 marine, utilization of N compounds by,13707
 media (solid) for, starch as agar substitute in,4721
 meiosis in,11789
 metabolism, book,10092
 electrical conductivity study method,2745

Bacteria (continued)

migration, in focal infection,9601
 in milk. (See *Milk, bacteria*.)
 motility, tests for,2753
 nasal filtering efficiency for,15329
 nitrate reduction by, enzymes involved,15425
 nitrite-, ammonia oxidation by, mechanism,8348
 nitrogen fixing. (See *Nitrogen, fixation*; *Rhizobium*; *Azotobacter*; etc.)
 nodule-forming. (See also *Rhizobium leguminosarum*; etc.)
 N excretion negative from,2741
 non-sporiferous, heat resistance, 15292
 detn.,6257
 logarithmic order of death in, 15292
 nuclear relations,2773
 numbers, arithmetic vs. logarithmic presentation,6309
 in Wisconsin lakes,7233
 in nut meats for ice cream mixes, 10068
 nutrition, amino-acid interrelationships in,15414
 oral incidence,8230
 lysozyme and inhibin of saliva as affecting,907
 oxidation-reduction potentials, carbohydrate metabolism and,2761
 oxidation of sex hormones by,5637
5638
 pathogenic, aerobic metabolism in carbohydrate-rich media,10082
 demonstration by fluorescent dyes,11575
 heterospecificity induced by Forssman antigen in,17170
 plant-, systematic position and toxonomy,15413
 pathogenicity, immunologic relations in chronic infections,17326
 as influenced by:
 agar,8221
 diphtheria-bacillus carbohydrate,8221
 gastric mucin,8221
 wavelength interference and,6189
 peptidases,2749
 Pettenkoferia parasitic on, review, 6317
 phage lysis, study,4597
 phage precursor within cells,4595
 phage reaction with, Na_2SO_4 as affecting,2619
 photoelectric nephelometer for counts vs. wts. of populations,1060
 physiological youth in relation to adaptive enzyme formation,6306
 phytopathogenic, classification,6637
 probability of single cell cultures from dilution plates,17765
 relation to host vascular tissues,4970
 specificity and virulence,17815
 taxonomy and nomenclature,6299
15413
 pigments, chem.,4719
 polysaccharides, antigenicity factors,9898, 9900
 effect on phagocytosis,9873
 produced by N-fixing,1053
 populations, density in suspensions, estimation,6764
 by dilution method,2762, 2763
17455, 17466
 factors in,10084
 propionic acid. (See *Propionibacterium*.)
 protein formation by,6313, 6314
 proteinases of aerobic,15424
 of anaerobic,15424
 purple, metabolism, hydrogenase rôle in,15421
 photosynthetic quotient,13714
 purple sulphur. (See *Rhodobacteriaceae*.)
 pyrogenic, granulation tissue resistance to,2588
 pyruvic acid metabolism by,1909
 "Ratin" types, fermentation reactions,8282
 receptors of strains vs. substrains, 850
 resistance to proliferation, non-specific factors in,6072
 respiration, salts as affecting,15396
 of rhizosphere, significance,8349
 in sea-water, apparatus for depth sampling,4718
 sensitization to biological action of light,15420
 serology in classification,2767
 single-cell culture methods,6308
 slow-lactose-fermenting,17449
 in colon group,17461
 typhoid-like infection by,17295

Bacteria (continued)

of soil. (See also *Ammonification*; *Azotobacter*; *Bacteria, nitrogen fixing*; *Humus*; *Nitrification*; *Nitrogen fixation*; *Soils*; etc.)
 abundance as influenced by benzoic acid compounds,17433
 autochthonous and zymogenic groups,13690
 auxin production by,17435
 bactericidal fraction,17451
 book,2968
 detn. method,8346
 as influenced by Cu,15405
 by environmental factors,13686
 physiological groups and factors affecting,8347
 plate counts,1050
 study scheme,17429
 synchronous seasonal changes in nos. in Appalachian podsol soils,13687
 tyrosine transformation to pigments by,17437
 soil fertility and,2743
 soil populations, environmental relations,13690
 spores, boiling soda soils as affecting,2679
 resistance mechanism,2668
 sensitizing to heat and light by ultraviolet,2754
 steam sterilization,11709
 thermal death points,2765
 spore-forming, morph., cytological and life history study,11789
 sporiferous, aerobic, bactericidal agent from,13694
 soil-, lysis of gram-positive cocci by soluble agent from,6180
 sterilization in water supplies,4660
 staining. (See under *Bacteriological technic*.)
 stock strains, preservation, by freezing and drying,8154
 strains and substrains, serological differences,850
 sugar-alcohol utilization by,2757
 sulphate-reducing, sources,6320
 survival in liquid helium,4659
 in stained prep.,8270
 suspension density, effect on germicidal action,10029
 swarming, of *Salmonella*, single-phase antigens obtained by,9845
 symbionts of termites,14281
 thermal death point, growth temp. as affecting,2789
 thermal death rate, peroxidase in raw milk as affecting,6275
 toxin. (See under *Toxin*.)
 toxoid-containing filtrates, sensitization to,17198
 transmission by paper,2680
 urease, activities,13718
 vaccines. (See *Vaccines*; and under specific organisms.)
 variation in, unstable vs. ordinary,6321
 violet, cultural characters,4719
 life cycle,17460
 virulence, effect on immunologic reactions,4429
 as influenced by:
 agar,8221
 embryonic tissue,11558
 gastric mucin,8221
 isoelectric point of muscles,2589
 lecithin-broth culture,17305
 numerical expression,13601
 wavelengths of erythrocytes vs., pathogenicity and,6189
Bacteriaceae (Bacteria), p. 1861
 Bactericidal action. (See also *Bactericides*.)
 of alcohols, surface tension and,979
 of aniline dyes, efficiency comparisons,11712
 of arspenamines, on *Spirochaeta pallida* in vitro,817
 of bismuth compounds, on *Spirochaeta pallida*,816
 of blood, as influenced by:
 factors,8115
 optochin + blood transfusion, 9893
 therapeutic horse sera, man,4518
 ultraviolet,926
 vegetative poisons,4561
 vitamin-B₁₂,2516
 vitamin-E,2517
 vitamins,2572, 2573
 shed, factors affecting,8115
 splenic "depot",2538
 of convolvulin,2688
 evaluation methods,8314
 of extract of soil bacillus,17451

- Bactericidal action (*continued*)
- of garlic volatile oil, 11676
 - of japañin, 2688
 - of lecithin soap, on intestinal bacteria, 4563
 - of oils, 13648
 - of pectin containing nickel, 2671
 - of phenylalkanoic acids, 4656
 - of scrubbing skin, 997
 - of soda soln. on spores, 990
 - of steam, factors affecting, 11709
 - of sulfanilamide, on hemolytic streptococci, 2667
 - of ultraviolet, on air, 11701
 - of wound-oiments, evaluation technic, 11705
- Bactericides. (See also *Antiseptics*; *Bacteriolysis*; *Disinfectants*; *Germicides*; and under specific bactericides, e. g., *Mercury chloride*.)
- effect on *Streptococcus viridans* in fibrin clot, 483
 - garlic as, 4902
 - from soil-bacillus, 13694
 - effect on pneumococcus exp. infections, 13695
 - sterilization of thermolabile substances in presence of, 8283
 - titers, malnutrition as affecting, 8106
 - tubercle bacillus tests with, 11690
 - ultracentrifugation of normal humoral, 835
- Bacteriæ, new, from intestines of rhesus monkey, 8362
- Bacteremia. (See also *Septicæmia*.)
- bacterial removal from, mechanism and rate, 17192
 - in exptl. pneumonia, dogs, 5821
 - hemolytic streptococci in, fever temp. as affecting, 815
 - meningococci, in pregnancy, 17309
 - in tuberculosis of dog (exp.), 9965
 - 14914
- Bacterins. (See *Vaccines, bacterial*; and under specific organisms.)
- Bacteriological products, biological assay, standardization, 6069
- Bacteriological technic. (See also *Culture media*; *Immunological technic*; *Pasteurization*; *Stains*; *Staining*; etc.; and under specific bacteria and reagents.)
- agar-agar introduction into, history, 13702
 - air-borne bacteria, sampling device for, 10018
 - air-filter test, method, 10010
 - anaerobic apparatus, 17350
 - for anaerobiosis, O₂ indicator in "ring plates," 8272
 - ball mill for bacterial disintegration, 17163
 - book, 15410
 - butter analysis, 2736
 - of canning industry, 6263
 - catalase test-tubes for mastitis milk test, 6226
 - centrifuging, for isolation of tubercle bacillus, 8236
 - collodion sac for animal experimentation, 17299
 - counts, arithmetic vs. logarithmic presentation, 6309
 - direct microscopic method, for milk bacteria, 13682
 - plate, of bacteria in soil, 1050
 - population estimation by dilution method, 2762, 2763
 - test-tube method, 17342
 - for diagnostic exam. of stools, 9998
 - disinfection rate, detn. apparatus, 2675
 - "double poured" plate, 8271
 - filters, pore diam. detn., 11616, 15419
 - and filtration, 9997
 - fixing and staining, survival of microorganisms after, 8270
 - Gard's swarming plate, for bacterial differentiation, 8263
 - gas burner for culture work, 4720
 - germicide coefficient detn., Reddish cup technic modified, 4649
 - germicide test methods, 8314, 10029
 - heat-resistance detn., technic for non-spore formers, 6257
 - histamine extraction and identification in cultures, 6308
 - H₂O₂ detn. in cultures, 11798
 - isolation, of intestinal bacteria, 11634
 - laboratory transfer hood, 17846
 - for meat inspection, 4682
 - metabolism studies, apparatus, 11790
 - milk analysis, 2738
 - agar-slants in, 15408
- photoelectric nephelometer for counts vs. wts. of populations, 1060
- photometric, for bacterial agglutinations, 842
- rectal feces collection for bacteriol. study, 13646
- separation of bacilli from lesions, 15258
- single-cell culture methods, 6308
- smear slide prep. method, 17339
- soda soln. as sporocide, 990
- spirochaete culture contaminants lysed by lysozyme, 865
- staining for flagella, 11663, 17469
- for *Fusiformis dentium*, 15418
- for opsonophagocytic test in brucellosis, 9984
- Romanowsky method, Puntoni modification, 1055
- single-cell isolations, methods, 6308
- sterilization, air and surface, by aerosols, 6216
- of apparatus, by boiling soda solns., 2679
- efficiency test for, 11709
- by steam, 2765
- of thermolabile substances in presence of bactericides, 8283
- sterilizers, testing of dry, 987
- stock culture preservation, by freezing and drying, 8154
- tubes for syphilis serodiagnosis, cleaning and sterilizing, 17332
- virulence attenuation by culture on embryonic tissues, 11558
- water analysis, apparatus for depth sampling, 4718
- estimation by dilution method, 1005
- water purification by Al₂(SO₄)₃, 8293
- Bacteriology. (See also *Bacteria*; *Microbiology*; *Microorganisms*; and under specific microorganisms.)
- anaerobes in nature and disease, book, 10086
 - of canned foods, 6263
 - clinical, book, 8266
 - dairy, trends, 6288
 - ecological, 13690
 - manuals, 15422, 17467
 - medical, books, 9902, 15427
 - of milk. (See under *Milk*.)
 - popular, books, 10074, 15410
 - precursor, history, 14325
 - of sea, 10832
 - soil. (See also *Soils*.)
 - principles and methods, 6296
 - surgical, 2682
 - textbooks, 9972, 11795, 15398, 15422
- Bacteriolysis. (See also *Autolysis*; *Bactericides*; *Bacteriolysins*; *Bacteriophage*.)
- of gram-positive cocci, by soluble agent from soil bacillus, 6160
- Bacteriophage. (See also *Autolysis*; *Bacteriolysis*; *Dissociation, microbic*; *Lysis*.)
- absorption by bacteria, 6159
 - by blood, saponin and glycerin as affecting, 953
 - by blood cells, 6159
 - by sensitized enterococci, 8214
 - activity, abolition in lysogenic dysentery bacillus cultures, 8200
 - aging as affecting, 13571
 - of *Aplanobacter stewarti*, from extracts of cereal seeds, 6675
 - for *Bact. coli*, chem. changes and enzyme relations, 8204
 - microscopical study, 4597
 - of *Bact. malvacearum*, 4969, 4971
 - chem., book, 7272
 - culture medium for, 2629
 - extraction by HgCl₂, 8206
 - growth phenomena in, 9946
 - intracellular precursor, 13566
 - heat inactivation, 9949
 - serial production from, 4595
 - like principle, in butter cultures, 11782
 - meningococci, adaptability, 2626
 - multiplication negative in bacterial filtrate, 15228
 - nature, origin and properties, 4587
 - nature of viruses and, 2621
 - particles, number per bacterial cell, 4597
 - photomicrographs, 4597
 - size, 4597
 - preservation by alkyl-dimethyl-benzyl-ammoniumchloride, 13572
 - reaction, with activated cells, mechanism, 13566
 - with bacteria, Na₂SO₄ as affecting, 2619
 - of *Rhizobium*, specificity and factors affecting, 17427
- surgical dyes and antiseptics as affecting, 17283
- testing method, 8202
- therapy of bacillary dysentery, 8194
- of dysentery outbreak in institution, 4590
- type stability of *Eberthella typhosa* variants to, 13588
- typing, of *Eberthella typhosa* strains, 13661
- Bacteriostasis, by sulfanilamide, electrode potential correlated, 6139
- Bacteriostatic action, of dental pastes, 4650
- of horse-radish vapors, 2724
 - of phenylmercuric compounds, 2677
 - of sodium lauryl SO₄, 4648
 - of sulfanilamide, 2654, 6237, 15213
 - of sulfapyridine, 2654
 - of sulphonamide derivatives, 811
- Bacteriotherapy, local cutaneous, for anthrax, 8100
- Bacterium* (p.1861), systematic position and type sp., 15413
- abortus. (See *Brucella a.*)
- aerogenes. (See also *Aerobacter a.*)
- fecal incidence of intermediate types and, 13647
- aertrycke. (See *Salmonella typhimurium*.)
- aeruginosum. (See *Pseudomonas aeruginosa*.)
- alkalescens. (See also *Shigella a.*)
- in feces of normal infants, 17316
- ampylorum. (See *Erwinia amylovora*.)
- angulatum, on tobacco, water-soaking of leaves as factor, 3169
- avicum. (See *Pasteurella avicum*.)
- bronchisepticus. (See *Brucella b.*)
- campestris. (See *Phytomonas campestris*.)
- cerasi. (See *Phytomonas c.*)
- citrin, on Citrus, in Ceylon, 8628
- coli. (See also *Escherichia c.*)
- bacteriophage, study, 4597
 - formic dehydrogenase, inactivation by O₂ and protection in cell, 14452
 - metabolism of adenine compounds by, 296
 - nitrate reduction by, 8367
 - enzymes involved, 15425
 - phage lysis, chemical changes and enzyme relations in, 8204
 - formicum, hydrogenation by, mechanism, 15426
- cholerae suis. (See *Salmonella choleraesuis*.)
- diphtheriae. (See *Corynebacterium d.*)
- duplex. (See *Hemophilus d.*)
- dysenteriae. (See *Shigella d.*; *S. paradyenteriae*.)
- enteritidis. (See *Salmonella e.*)
- Breslau. (See *Salmonella typhimurium*.)
- erysipelasatum suum. (See *Erysipelothrix rhusiopathiae*.)
- gallinarum. (See *Shigella g.*)
- globiforme, growth in soil, moisture changes and, 1047
- incidence in soils, Canada, 1051
- gutherii. (See *Streptococcus lactis*.)
- holci. (See *Phytomonas cerasi*.)
- japonicum. (See *Rhizobium j.*)
- lactis aerogenes. (See *Aerobacter a.*)
- leptosepticum. (See *Pasteurella cuniculicida*.)
- linens, on Limberger cheese, 10066
- malvacearum, bacteriophage, 4969, 4971
- on cotton, control by seed disinfection, 17828
 - genetics of leaf resistance to, 16173
- melitense. (See *Brucella m.*)
- monocytogenes. (See also *Listeria m.*)
- lymphatic-tissue reactions to repeated inj., 11522
 - meningitis case due to, 8244
 - mononucleosis associated with, 11552
- morganii. (See *Proteus morganii*.)
- necrophorum, isolation in presence of *Proteus*, 11634
- sulfanilamide effect on infections by, 6140
- ozenae. (See also *Klebsiella ozenae*.)
- staphylococci antagonistic to, 11803
- paratyphosum. (See also *Salmonella spp.*)
- in bovine abortion etiology, 15364
 - B, meningitis in infant due to, 9964
 - C, enteric fever due to, Egypt, 17307
- pestis. (See *Pasteurella p.*)
- phaseoli. (See *Phytomonas p.*)
- pneumoniae. (See *Diplococcus p.*; *Klebsiella p.*)
- prodigiosum. (See *Serratia marcescens*.)
- proteus, morph. and cultural development of growth types and phases, 8363

- pseudotuberculosis*. (See *Pasteurella p.*)
psittacosis. (See *Salmonella typhimurium*.)
pullorum. (See *Salmonella p.*)
pyocyaneum. (See *Pseudomonas aeruginosa*.)
pyogenes. (See *Corynebacterium p.*)
radicicola. (See *Rhizobium leguminosarum*.)
radiobacter, growth in soil, moisture changes and, 1047
rhinoscleromatidis. (See also *Klebsiella r.*)
staphylococci antagonistic to, 11803
rhustopathiae. (See *Erysipelothrix r.*)
sauroalli, tumors of chuckawalla due to, 11728
savastanoi, on olive, leaf-scars as infection channel, 12146
sepedonicum. (See also *Phytomonas sepedonica*.)
on potato, in Colorado, 3116
identification and control, 10353
shigae. (See *Shigella dysenteriae*.)
solanacearum, host range, 15815
on potato, control by adjustment of soil pH, 15868
on tomato, varietal susceptibility, 14053
as vascular parasite, physiology, 4970
weed hosts, 3169
stewartii, on corn, varietal resistance tests, 17527
syringae. (See *Phytomonas s.*)
tularensis. (See *Pasteurella tularensis*.)
tumefaciens. (See also *Phytomonas t.*)
virulence on *Ricinus*, K salts affecting, 14087
typhi. (See *Eberthella typhosa*.)
typhiflavum, variant resembling typhoid bacillus, H and O antigens compared, 6045
typhi murium. (See *Salmonella typhimurium*.)
typhosum, phagocytosis in immune vs. normal sera, 13496
receptors, phagocytosis and, 13496
vesicatorum, tomato leaf spot due to, Japan, 14054
viscosum. (See *Alcaligenes viscosus*.)
welchii. (See *Clostridium perfringens*.)
Badger(s) of Missouri and Iowa, 18105
rattlesnake as food, 5240
Baeckea (p.1865⁴), n. comb., and n. var., 11392
Baeus (p.1878²) *latrodecti*, parasite of *Latrodectus* eggs, 5069
Bagridae (Pisces), p.1879³
Bailey, John Frederick, biography, 29
Bait, banding, for *Alophila pomataria*, 10424
captive ♀♀, control of nun moth, 14132
for *Cochliomyia americana*, Texas, 15918
for field cricket, Louisiana, 5027
formula, for mole cricket, 3210
for house fly, 5072
ingredients, variation for army worm, 3215
insect, spontaneous heating, 5074
for insect control, use of caged ♀♀, 1504
for Japanese beetle, 12208
poisoned, for *Cirphis unipunctata*, 10465
for greenhouse crickets, 14114
in stomach poison tests, for grasshoppers, 12237
traps, on airplanes, 5029, 10767
for codling moth, 12175
location, for blowflies, 5061
for mosquitos, 12213, 12221
for *Ochotona*, 7038
for orchard insects, 10389
for sparrow control, 16289
for wireworms, 10406
for wireworms, 5083
BAKERIOLA (Homopt.) (p.1875⁴), new name for *Iopocerus*, 18016
Bakerius (p.1875⁴) *glandulosus*, on *Mikania*, 12381
Balaenidae (Mammalia), p.1883²
Balaenoptera (p.1883²), Atlantic and Pacific species compared, 12444
borealis, identity of northern-hemisphere and southern-hemisphere forms, 1660
Balaenopteridae (Mammalia), p.1883²
Balance of nature. (See *Ecological equilibrium*.)
Balanidae (Crustacea), p.1873³
Balanomorpha (Crustacea), p.1873³
Balanis (p.1861⁴), tax., 2800, 17500
Balantidium (p.1868³) *coli*, incidence, Havana, 6741
praenucleatum, from *Blatta*, 3265
Balanus (p.1873³), harboring gregarines, in Turkey, 6766
amphitrite communis, variability, 12330
balanoides, biology, 10796
Baldness. (See *Hair, loss*.)
Baldwin, Samuel Prentiss, biography, 14330
Balladyna (p.1861³), n. spp., 17500
Balladynella (p.1861³), n. spp., 17500
Balladynopsis (p.1861³), n. spp., 17498
Ballistocardiogram, studies, 12643, 12740
Balloons, radio-sounding, use in detn. of meteorology conditions, 110
Balsam Canada, acidity, detn. and factors affecting, 7067
Balsaminaceae (Dicotyledones), p.1866²
Balsamorhiza (p.1867⁴), n. sp., 1158
Bamboo(s). (See genera of bamboos.)
Bamboo beetle (=bamboo shot-borer). (See *Dinoderus minutus*.)
Bambusa chungii, white powder on culms, properties of, 6539
Banana(s). (See also *Musa*.)
diseases, Haiti, 15892
effect on growth of children, 16824
on intestinal flora and constipation, 3768
fermenting, olfactory reactions of *Drosophila* to, 443
new hybrid, 1259
Panama disease. (See *Fusarium*.)
respiration, methods of study, 6603
ripening, ethylene produced in, 10327
Sclerotium disease (*Corticium centrifugum*), infection and control, 4964
transportation diseases, Formosa, 1420
Banana aphid. (See *Pentalonia nigro-nervosa*.)
Banana root thrips. (See also *Scirtothrips signipennis*.)
biology and control, Queensland, 17853
..... 17854
Banara (p.1866²), n. sp., 2831
Bandicoot, mites, as typhus vectors, 984
as "Q"-fever reservoir, 8196
rat leprosy in, 17372
Bandicoota indica, rat leprosy in, 17372
Bang's disease. (See *Brucella abortus*.)
Banisteria caapi, alkaloid, harmine as, 14796
Bankiella (p.1872⁴) *gouldi*, blood cell morphology and blood coagulation time, 5384
Banksia (p.1865²), in Papuaia, 11883
Baptisia (p.1865²), spp. of Mississippi valley, 17531
Bárány pointing test. (See *Ear, labyrinth; Posture; Vestibular apparatus*.)
Barbaso. (See *Lonchocarpus*.)
Barberry. (See also *Berberis; Mahonia*.)
eradication, in Pennsylvania, 3169
in Virginia, 15891
for wheat stem rust control, U.S.A., 1462
Barbital, absorption from digestive tract, rat, 9249
anesthesia, effect on spinal reflexes, 2218
cumulative poisoning, brain content and, 9576
effect on:
blood gases in spinal anesthesia, 254
cyclopropane anesthesia, 7797
epinephrine action on circulatory system, 16793
narcotic action, analeptics as affecting, 16765
sodium, effect on actions of epinephrine and acetylcholine, 11234
Barbituric acid, 1-amy-5-5-diethyl-, isomeric, toxicity and action, 9530
derivatives. (See also *Amytal; Phenobarbital*.)
action, cardio-depressant, stimulants and, turtle, 2310
as influenced by liver damage, 3745
by temp., 4147
depression, antidotal infusions of glucose or saline, 5741
picrotoxin, metrazol and coramine as affecting, 13188
detn., 9117
effect on:
diaphragm and respiratory center, 7779
heart in cyclopropane anesthesia, 13178
insulin action on body temp., 11241
intestine, 4105, 13178
melanophores, 16632
metabolism of liver and brain, rat, 13189
respiration and blood pressure, 16767
tissue culture of iris epithelium, 11224
vasomotor reflexes, 16752
effects of combinations, 13172
with alcohol, 13173
during labor, 2169
evipan, action and toxicity, 4169
..... 7757, 7778, 13177
..... 16752, 16766, 16767
narconumal, metabolic fate, 17178
toxicity, 16766, 16767
vasomotor action, 16752
N-methyl-, fate in body, 7751
N-substituted, study, 13178
novocaine convulsions controlled by, 530
pernocton, effects, 2297, 7778, 16752
toxicity, 16767
reactions, O₂ therapy in, 12643
seasonal variations of response, mice, 4108, 4109
seconal, anesthetic for digitalis assay, cat, 523
sensitivity to, age and, pig, 7757
sex life and, 13178
synergism with atropine, 5769
thio-, effect on heart and blood pressure, 525
study, 13178
tolerance to, 540
toxicity, 11253
structure and, 16766, 16767
ethyl-n-hexyl-, hypnotic properties and toxicity, mice, 4108, 4109
ethyl(1-methylbutyl), diet as affecting anesthetic action, rodents, 4121
Barbula (p.1863²), tax., 4748, 6369
monograph, 6372
Barbus (p.1879³) *phutunio*, use in mosquito control, Bengal, 12225
puckelli, nematode parasites, 15998
Barger, George, biography, 16138
Barinophyton (p.1864²), † dist., tax. (D), 13716
Barium, antidotes to, 7796
effect on:
arterial tone, 13118
auricle, 7726
myotonia, goat, 2312
antimonyl tartrate, for gapeworms, 3253
chloride, activity in amino acid solns, detn., 14483
effect on iris sphincter, 13155
on male genitalia, 16622, 16623
fluosilicate. (See under *Fluosilicates*.)
stearate, antigen-antibody reactions between layers adsorbed on films, 11554
Bark. (See also *Root; Stem*.)
composition, apple, 1267
of drug plants, ash analyses, 8562
tannin in, Canadian conifers, 1330
Bark beetles. (See *Scolytidae*.)
Barley. (See also *Hordeum; Malt*.)
amylase activity, vars. compared, 1199
Co, Cu, and Ni as affecting, 1407
commercial vars. of Middle West, identification, 2926
fructosan metabolism, minerals as affecting, 8584
genetic basis of chlorophyll formation, mechanism of induced mutating, 12525
germinating, development of amylase in, 1368
harvesting, mite dermatitis, Bulgaria, 10445
inheritance of date of ear emergence, 14356
linkage studies, review, 8940
malting quality, var. tests, Canada, Great Britain, 2918, 11948
..... 2944, 13820
N content, saccharifying activity and, Canadian vars., 6453
N in protein fractions, vars. compared, 1174
respiration, kinetics, 10324
rust (*Puccinia anomala*), physiologic races, Europe, 6628
smuts. (See *Ustilago*.)
covered smut. (See also *Ustilago hordei*.)
environmental factors, 3169
incidence, irrigation as affecting, 1467
loose smut. (See also *Ustilago nuda*.)
inoculation technique, 15807
stemrust (*Puccinia graminis*), resistant var., 6674

- Barley (*continued*)
 stripe. (See *Helminthosporium graminum*.)
 variety tests, Canada,.....15555
 Great Britain,.....2960, 18839
 USSR,.....18835
 yellow stripe rust. (See *Puccinia glumarum*.)
 yield and N absorption, P and N as affecting,.....1350
 Barnacle(s). (See also *Balanus*.)
 as fouling organisms, ecology,.....10793
 Barnardius spp., psittacosis in,.....954
 Barnea (p.1872⁴), larva described,.....3301
 candida eggs, cytoplasm, radium as affecting,.....9107
 Barton, Benjamin Smith, biography, 8886
 Bartonella (p.1861¹). (See also *Grahamella*.)
 -anemia in rats, immunity in,.....2515
 calf infected (?) by,.....2708
 chapter in lab manual,.....14164
 review,.....6158
 muris, arsenobenzol prophylaxis of infection,.....8199
 culture and antigenic relations, 8199
 inoculations,.....8199
 splenectomy effect on infection, 8199
 sturmani, in buffalo,.....14175
 Bartonia (p.1866⁴) n. syn.,.....1158
 Basal metabolism. (See under *Metabolism* (respiratory and energy).)
 Basanichthys (p.1879²), tax.,.....5160
 Base(s). (See also *Alkalies*; *Alkaloids*.)
 exchange, in soils,.....2966
 relation to tillage,.....1221
 in liver, pig,.....12800
 in lung tissue, cattle,.....12801
 Basedow's disease. (See *Gotter*, *exophthalmic*.)
 Basidiobolus (p.1861¹) ranarum, origin of lipoidal droplets in cells,.....7107
 Basidiomycetes (Fungi), p.1862²
 Basidium, cytology, *Russula*, *Lactarius*, 44
 morph., definition,.....1078
 Basilia (p.1878³) nattereri, on bats, Berlin,.....10443
 Basiosporium gallarum, in axillary shoots of corn,.....14047
 Basommatophora (Mollusca), p.1872²
 Basophile. (See under *Leucocyta*.)
 Bass (See also *Micropterus*.)
 ability to evade capture,.....16276
 parasites, Florida,.....15948
 smallmouth. (See also *Micropterus dolomieu*.)
 black, trematode infection as affecting,.....1556
 Basswood. (See also *Tilia*.)
 Nectria canker, quantitative infection relations,.....3169
 Bast. (See *Phloem*.)
 Bat(s). (See also *Chiroptera*; and under genera *Eptesicus*, *Myotis*, and *Sturmia*.)
 communication among,.....12454
 cytology of ♀ reproductive tract, 9426
 emotional reactions in,.....9142
 flies, Berlin,.....10443
 food for, Florida,.....7038
 fringed-tailed, in British Columbia,.....5240
 hibernation,.....5219
 organs and activity during,.....3965
 Leptospira from kidney,.....6183
 natural history, book,.....14308
 neotropical,.....12455
 nervous terminalis and Jacobson's organ, development,.....13328
 rabies transmitted to livestock and man by,.....9956
 rafinesque, in Michigan,.....7038
 red, rearing,.....8893
 reproductive cycle in,.....5671
 sounds emitted by, pitch,.....5244
 spotted, in California,.....7038
 Trichobius spp. (Diptera) from,.....3337
 of Trinidad,.....5230
 vampire, rabies virus strain from, 6170
 Baths, carbonated water, effect on alveolar CO₂,.....14605
 Finnish, effect on electrocardiogram,.....2272
 public, culture for *Trich. vaginalis* in,.....12274
 Bathyalcyon (p.1869²), morph. and hist.,.....6777
 Bathyergus sullus, ischnolaelaps and Lisrophoroides from,.....17983
 Bathyporeia (p.1874⁴), revision,.....3309
 swimming and burrowing habits, 12337
 zonation in relation to tide level, 10798
 Baboid (Elaeobranchii), p.1879¹
 Batrachia. (See *Amphibia*; *Frog(s)*; etc.)
 Batrachoididae (Pisces), p.1880⁴
 Batrachus (p.1880⁴) porosus, transferred to Aphis,.....12421
 BATTARRAEACEAE (Fungi) (p.1862⁴),.....11830
 Battarraea (p.1862⁴) phalloides, in California,.....2302
 Bauhinia championi, anomalous secondary growth,.....8449
 secondary growth, in axis,.....8449
 reticulata, tartaric acid in leaves and fruits,.....6554
 Bayer 205. (See *Germanin*.)
 Bazzania (p.1863²), Mastigobryum spp. transf. to,.....8419
 Bdelloida (Rotatoria), p.1871⁴
 Bdelloura (p.1869⁴) candida, meiosis,.....60
 Bdellouridae (Platyhelminthes), p.1869¹
 Beach. (See *Littoral*.)
 Bean(s). (See also *Phaseolus*.)
 anthracnose. (See also *Colletotrichum lindemuthianum*.)
 inheritance of resistance to,.....3169
 beetle pests and broom rape, Sicily,.....5044
 blight (bacterial), control by seed disinfection,.....3169
 botulism from home-canned,.....17383
 broad. (See *Broad bean*.)
 castor. (See *Castor bean*.)
 curly top (virus), virus in root tips,.....1482
 field, development, factors affecting, Germany,.....6480
 variety tests, Germany,.....11951
 flue dust as affecting,.....4910
 foliage, physical characters, relation to severity of insect attack,.....1495
 grinding and use in bread making, 2948
 Jack. (See *Jack bean*.)
 kidney, translocation and metabolism, indoleacetic acid as affecting,.....4920
 seed germination and seedling growth, factors affecting,.....15619
 Michelite, culture and characters,.....13807
 mildew (*Erysiphe polygoni*), host range,.....17813
 mosaic (virus), effect on plant growth and yield,.....3155
 phyllody in,.....17555
 respiration and translocation, indoleacetic acid as affecting,.....4916
 root rot (*Fusarium martii*), var. susceptibility and effect on yield,.....3155
 rust (*Uromyces phaseoli*), environmental factors as affecting,.....5004
 pathogenicity, light as affecting,.....17822
 physiologic races,.....3169
 physiologic specialization,.....17812
 var. tests and new physiologic form Hawaii,.....15889
 snap, culture and pests, S. O.,.....17584
 soy. (See *Soy bean*.)
 stem rot (*Rhizoctonia*), nutrient conditions as affecting,.....3169
 Tonka,.....13845
 transpiration, spray coatings as affecting,.....8627
 virus diseases, in Netherlands,.....17789
 web-blight (*Corticium microsclerotia*),.....15812
 white pea, fertilizer for, Mich., 11949
 Bean weevil. (See *Acanthoscelides obtectus* (= *Myliabris obtectus*).)
 Bear, black, in New York,.....5219
 notes on,.....14312
 winter food habits,.....18090
 of Thibet,.....5223
 Beauveria (p.1862²), coloration of medium due to bacterial associates,.....8406
 as parasite of *Pisema* and *Galleria*,.....8665
 proteolytic power of spp.,.....970
 bassiana, in corn borer control, 1937,.....12229
 densa, attacking June beetles,.....15450
 Beauverie, Jean, biography, 10702, 14328
 Beaver. (See also *Castor*.)
 activity,.....18106
 cerebrum motor cortex and decerebrate rigidity study,.....5695
 dams as geologic agents,.....166
 insensitivity to CO₂,.....3781
 mating in,.....5280
 populations, increase in Sweden,.....162
 methods of study,.....3584
 Beckeria (p.1877⁴) pannonicus,.....18000
 Bedbug. (See *Cimex lectularius*.)
 Bee(s). (For material on honeybee see *Apiculture*; *Apis mellifica*; *Honeybee*.)
 allergy to stings,.....15159
 bumble, as pollinators, floral types and red clover pollinated by,.....12574
 carpenter, note,.....10607
 pebrine transmission by spermatozoa,.....1561
 venom. (See under *Venom*.)
 visiting flowers, in Ponary,.....1826
 Bee keeping. (See *Apiculture*.)
 Beech. (See also *Fagus*; *Nothofagus*.)
 forests, in Belgium,.....3026
 in Carpathians,.....7201
 tree, cavities, fauna,.....1831
 Beef. (See *Cattle*; *Meat*.)
 Beer. (See also *Wort*.)
 Sarcina-infected, nature and cause, 8336
 Beer-yeast. (See under *Yeast*.)
 Beet(s). (See also *Beta*; *Mangel*; *Sugar beets*.)
 allergies due to pollen and seed dust,.....6047
 culture, recent developments in Germany,.....2942
 hemicellulose extraction from pulp,.....11958
 internal black spot, as mineral deficiency disease,.....14077
 leafhopper on bionomics and control, Ida.,.....12186
 shape of roots, factors affecting, 11992
 tillage as affecting, Germany,.....2941
 tricotyledony in,.....6442
 virus diseases, in Netherlands,.....17789
 webworm. (See *Loxostege sticticalis*.)
 Beet leaf-hopper. (See *Eutettix tenellus*.)
 Beet nematode. (See *Heterodera schachtii*.)
 Beetles. (See also *Coleoptera*.)
 bark, control by injection of poisons into sap,.....14126
 counting in tree trunk, method, 3199
 in forestry, book,.....15911
 of Minnesota,.....18028
 boring, damage to rum punches,.....8647
 cactus feeding spp., monograph,.....8792
 coccinellid, glands in head capsule structure,.....2478A
 collecting technic,.....8765
 cucumber, winter quarters and control,.....17866, 17871
 as egg predator of chinchbug,.....5066
 granary, life history, ecology, morph., control,.....5047
 Japanese. (See *Popillia japonica*.)
 June. (See also *Melolontha hippocastani*.)
 Beauveria (fungus) attacking, 15450
 eggs and grubs eaten by carabid,.....10454
 longicorn, longevity,.....8651
 mountain pine, control,.....14125
 powder post. (See *Lyctus* spp.)
 scavengers,.....12354
 sugar cane, control by resistant vars., La.,.....12195
 in the Yellowstone, Wyoming,.....13
 Beggiatoaceae (Bacteria), p.1861¹
 Begonia (p.1866²), n. spp.,.....2328A, 6429
 semperflorens, leaf nematode, control, by hot water treatment,.....3150
 Pythium disease,.....1482
 tuberhybrida, bacterial leaf spot,.....14051
 Begoniaceae (Dicotyledones), p.1866³
 nucleus and chromosomes in,.....41
 Behavior. (See also *Instinct*; *Intelligence*; *Learning*; *Memory*; *Tropisms*.)
 adaptation to problems, chimpanzee,.....9450
 ambiguous conditioning, extinction and, dog,.....9443
 auditory induction of abnormal pattern, rat,.....16673
 of birds territorial dominance,.....18076
 of child, infections as affecting,.....11271
 of chimpanzee,.....10670
 communication among bats,.....12454
 deception, study,.....9434
 of decorticate guinea pigs,.....16675
 delayed reaction and memory, rats,.....9444
 demarcation of territory by anal gland secretion, hyenas,.....10769
 development in fetal sheep,.....11115
 of domestic vs. tame animals,.....8069
 escape, in marsh rabbit,.....18089
 field orientation after cortical destruction, rat,.....8986
 goal gradient, speed of locomotion gradient and, rat,.....9438
 habitats, of birds of Hungary,.....18067
18069

- time discriminatory, apparatus for, 16396
infant, patterning, spiral organization in, 7616
as influenced by:
 environment, rats in captivity for 14 yrs., 3988
 frontal lobe lesions, 9491
 testosterone, ♀ canary, 14697
 instinctive, of animosity and tolerance in queen polistes wasps, 9448
 interpretation of display, and relation to sexual selection, 1693
 joint, habit extinction, rat, 9489
 locomotor, social facilitation, rat, 2179
 maternal, after ablation of neocortex, rat, 14679
 cortical destruction as affecting, rat, 2190
 in pouchless marsupial, 18087
 mating. (See *Mating behavior*.)
 maze, cerebral injury as affecting, rat, 2176
 disinhibition phenomena, rat, 9449
 mimicry by birds, 5207
 new periodical, 3434
 phylogenetic deductions from, 5281
 polygamy, polyandry and promiscuity in wild birds, sex ratio as affecting, 10642
 probability as a determiner, 14692
 protective. (See *Defense reactions*.)
 reasoning, in maze-bright and maze-dull rats, 3991
 score, problem situation as affecting, rat, 3992
 of red deer, book, 3535
 response, acquired, extinction as function of interval between successive non-rewarded trials, 2187
 response of housefly to light of different wave lengths, 6702
 rhythm persistence in animals, 11120
 of robin, 18070
 salmon psychology, 10629
 social, of ants, compared with man, 8871
 in exptl. animals, 8883
 of song sparrow, 18075
 startle pattern, book, 7621
 synchronous in firefly, 6869
 territorial defense in birds (*Anthus*), 7031
 territorial, owl, 7011, 18056
 territorial and social, night heron, 7019
 Thorndikian response, weakening and extinction, 5684
 time-discriminatory, apparatus for, 16396
 unlearned visually detd. reactions in larvae, 3987
 of *Vespa* (wasp), 10609
 visually-guided, occipital lesions as affecting, monkey, 7667
Beilshmidia (p.1865²), n. sp., 2865
Belfanti, Serafino, biography, 16145
Belladonna. (See also *Atropa belladonna*; *Atropine*.)
 adulterants, palisade ratio in detection, 8564
 infusion, electrophoresis, 510
 plaster, B. P. and U. S. P. assays compared, 3054
 as treatment for Parkinsonism, sources compared, 8554, 8557
Belonanthus (p.1867³), revision, 10150
Belonidium (p.1862¹), n. sp., 15433
Beloperone (p.1867³), n. sp., 6437
Belovsia (p.1876²), n. sp., 12351
Belvosia bifasciata, parasite of *Hemileuca*, 5141
Bembidon (p.1876¹) *schmidtii*, n. var., 12348
Bembiz (p.1878⁴) *nicolai*, 10608
Bemisia (p.1875⁴) *gossypiperda*, as vector, of tobacco leaf curl, 17788
 hibisci, on cotton, Sao Paulo, 12198
Bence-Jones protein. (See under *Proteins*.)
Benedenia (p.1870³) *pacifica* (*Epibdella* p.), 10544
Benthopecten (p.1871⁴) *armatus* (*Nidorella armata*), 14225
Benthopectinidae (*Echinodermata*), p.1871⁴
Benthosuchus (p.1880¹), shagreen teeth, microscopic structure, 16954
Benthotrema (p.1869⁴) *hoplognathi*, 6803
Bentonite. (See also *Nicotine-bentonite*.)
 as inert material in insect pest control, 12232
 S mixtures with, non-colloidal state, 8169
Benzaldehyde, 4-hydroxy-3-methoxy-. (See *Vanillin*.)
Benzedrine, actions, 532, 12643
 derivatives, effect on:
 central nervous system, 532
 circulation, 16782
 Daphnia magna, 14861
 the psyche, man, 14819
 smooth muscle, 11216
 pharm., 11226
 effect on:
 alcohol depression, 13178
 bile secretion, cat., 11222
 blood pressure, 519
 spleen size and red cell count, dog, 14841
 brain potentials, 2220
 bronchial mucosa, 5789
 central heat production, 11221
 central nervous and circulatory systems, 552
 cephalic vessels, 548
 circulatory system, 7753, 11243
 13146, 13178, 14768, 16764
 heart-lung prep., 2292
 intestine, 13150
 iris, 4045, 13150, 13155
 metabolism and circulatory system, man, 14788
 sleep, 14768
 excretion, detn., 12643
 in man, 293
 p-hydroxy-. (See *Paradichlorobenzene*.)
 pharm. and toxicology, 16791
 study, 13178
 subjective effects, man, 2284
Benzene, derivatives, hemolysis accelerated by, 12763
 sulphur in pneumococcal infections, mechanism of action, 9929
 toxicity to codling moth larvae, 10401
 -epinephrine, effect on heart, treatment, 5785
 fumigation, of tobacco for control of blue mold, 3151
 of tobacco seedbeds, 8630
 as fungicide, 6682
 poisoning, blood studies, 11323
 pathol. and therapy, 13279
 urinary sulfate test, 7922
 toxicity, 5738
 dimethylaminoazo-, as cause of liver cancer, rat, 4214, 4215
 para-amino sulfonamide. (See *Sulfanilamide*.)
 paradichloro-. (See *Paradichlorobenzene*.)
Benzidine, effect on heparin and tumors, 14884
Benzoates, alkoxyl, of diethylaminoalcohols, chem. and pharm., 9557
 of 1-alkyl-2-piperidyl-alcohols, prep. and properties, 11260
 sodium, effect on soil microorganisms, 17433
 fibrinogen destroyed by, 8639
Benzodioxane. (See also *Dioxane*.)
diethylaminomethyl-, effect on toxic apnea, rabbit, 14814
 on uterus, 5742
piperidomethyl-3-, effect on:
 action of epinephrine, rabbit, 13169
 blood pressure, renal-hypertensive dogs, 14822
 heart rate and, hypertensive dog, 12643
 cardiac fibrillation, 5735
 cocaine action on retractor penis, dog, 7733
 heart, frog and cat, 11229
 toxic apnea, rabbit, 14814
 uterus, 5742
Benzoic acid, compounds, effect on soil microorganisms, 17433
 ester, spasmolytic action, 4104
 as fungicide against pineapple blackrot, 6676
 p-hydroxy, esters, as preservatives, 11769
 in foods, detn. and isolation, 8556
 urinary elimination, spectrographic detn., 14670
Benzoyl benzoate, for scabies, 10436
Benzophenanthrene, carcinogenic activity, structure, 2355
Benzpyrene, carcinogenic action, diet and, 14874
 mouse carcass as affecting, 13215
 vs. physical characteristics, 574
 structure and chem. reactivity, 2355
 vit. B as affecting, mouse, 16519
 as cause of epithelioma, man, 589
 effect on:
 amphibia, 11284
 dehydrogenase, 3561
 growth of induced tumors, rodents, 585
 skin regeneration, mice, 4188
 estrogenic action, 387
 in production of chicken sarcoma, transmissibility, 14904
 of neoplastic diseases, mice, 580
 solubility, ether and Na cholestanon-sulphonate and, effect on tumors, 7884, 7851
Benzyl compounds, detoxication, rabbit and rat, 9191
Benzylacetoacetic acid, cleavage in kidney, 9407, 16658
Benzylsulfanilamide, pharm. and toxicology, 7738
Berberine, in *Mahonia* spp., 4398
Berberis (p.1865²), n. spp., 2865
Bergey, David H., biography, 14329
Beriberi. (See also *Polyneuritis*; *Vitamin B*.)
 cardiovascular effects, 13267
 edema in, 4258
 effect on brain potentials, pigeon, 11144
 pellagra, vit. B therapy and, 11345
 13268, 14943, 14952
 Zn content of epidermal structures, 11388
Berkhoutia (p.1862⁴), as subgenus of *Geotrichum*, 4638
Bernard, Claude, biography, 7079
 writings of, 1883A
Bernardia (p.1866¹) *incana*, 17535
Beryllium, as cause of rickets, chickens, 2402
Besleria (p.1867²), tax., 6437, 10146
Besredka's antiviral. (See *Antivirus Besredka's*.)
Bessa (p.1878¹) *selecta*, parasite of spruce sawfly, 12209
Beta (p.1865²), origin of intercellular spaces in meristems, 2908
 pollen dissemination and anthesis, 6459
 vulgaris. (See also *Beet*; *Mangel*; *Sugar beet*.)
Betabacterium, in leaven, effect on rye bread, 10061
 vermiforme, dextran production from sucrose by, 6302
Betacoccus arabinosaccharosus. (See also *Leuconostoc mesenteroides*.)
 hemolyticus, dextran produced from sucrose by, 6319
Beta-hydroxybutyric acid. (See under *Butyric acid*.)
Betaine, lipotropic properties, 10988
 in liver, *Gadus*, 261
Beta-rays. (See also radioactive substances, e.g., *Radium*.)
 effect on sea urchin eggs and sperm, 12699, 12705
Betel palm. (See *Palm(s)*.)
Bethyridae (Hymenoptera), p.1878⁴
Betula (p.1865²), Scandinavian spp., 1124
 Taphrina boycei on, 6351
 alba, sap, pH and acid content, 1395
 nana, as relict in German moors, 9026
Betulaceae (Dicotyledones), p.1865¹
Beverages, alcoholic. (See also *Alcohol*; and specific beverages, e.g., *Beer*, *Rum*, *Wine*.)
 apple juice, pasteurization, 2780
 dispensaries, sanitary control, 8299
 fruit, concn. by freezing, 1021
 pasteurization, 1020, 1032
Beverage plants, wild, of U. S. A., 12018
Bews, J. W., biography, 16133
Biatorrella (p.1862¹), tax., 6364, 17503
Bibio (p.1877²), n. spp., 12367
Bibionidae (Diptera), p.1877²
Bibliography, citation of authorities, in entomology, 16024
 for entomological writings, 1689
 indexing biol. literature by means of symbols, 14336
 library guide for chemists, 10709
Biblopectus (p.1876¹), n. spp., 12349
Bicarbonate(s). (See *Acid-base equilibrium*; and specific bicarbonates, e.g., *Sodium bicarbonate*.)
Bicarinarus, *Conoderus*, n. name for, 8777
Biermer's disease. (See *Anemia, pernicious*.)
Bifusella (p.1862¹) *vaccinii*, status, 11812
Bignoniaceae (Dicotyledones), p.1867²
Bile. (See also *Gallbladder*; *Liver*.)
 acids. (See also *Cholic acid*; *Taurocholic acid*.)
 comp. apes, 12902
 rabbit, 12891
 sea-bears, 12903
 detn., 16349
 effect on action of pancreatic lipase, 12892

- Bile (continued)**
 acids (continued)
 elimination in bile after oral admin., 12643
 hypoglycemic action, rabbits, 9147
 in portal blood, 7352
 review, 14441
 in Weil's disease, 11031
 As excretion in, 16814
 in carcass fat, distinction from carotene, 5998
 chloride, cholesterol and bile salt in, feeding as affecting, 11034
 choline and choline-containing lipids in, 12899
 choline and phospholipid in, 12643
 composition, diet as affecting, fox, 12895
 factors affecting, 9268
 in fox, otter and weasel, 9261
 in raccoon and marten, 9266
 culture reports on biliary drainage and significance, 11652
 desiccated hog, effect on bile acid comp. of fistula bile, 12643
 dried, differentiation of pneumococci and streptococci by, 11657
 duodenal ulcer and, dog, 7501
 effect on:
 diphtheria toxin, 909
 heart, 16749
 liver disease, vit. K and, 5839
 metabolism of tissues, 10969
 propulsion rate in Thiry-Vella loops, dog, 9256
 secretion, small intestine, 12643
 fistula, vit. K as affecting blood prothrombin in, 7497, 7498, 11330
 flow, as influenced by:
 autonomic drugs, 11222
 heat, 12643
 muscle extract, 3851
 pH, chem. and effect on stones, 2105
 papillae, drugs as affecting, rabbit, 13137
 observation, 13178
 pigments, bilirubin, in blood, altitude as affecting, 10940
 in newborn infants, 11273
 detn., in blood, 9118
 in gall stones, 209
 oxidizing agents as affecting, 16328
 physico-chem. state in blood and urine, 3650
 relation to Hb, in anemic dogs, 11315
 synthesis, 16557
 in tuberculous anemia, 7875
 Van den Bergh reaction, biphase, study, 7511
 bilirubinoid, vinyl substituted, synthesis, 16557
 in urine after small intestine occlusion, dog, 12876
 u.-v. absorption spectra, 14578
 rôle in tumor etiology, mice, 16885
 salts. (See also *Cholates*; *Taurocholates*.)
 circulation, study, cat, 5595
 effect on:
 hemorrhagic diathesis of obstructive jaundice, 14514
 liver glycogenolysis, 5599
 propulsion rate in Thiry-Vella loops, dog, 9256
 prothrombin and bleeding, 11330
 viruses, 9954
 metabolism, gum acacia in bile fistula dogs as affecting, 16448
 pneumococcus lysis by, specific anti-autolytic enzyme as affecting, 13494
 u.-v. light as affecting, 13495
 sulfanilamide conc. in, 11028
 in urine after small intestine occlusion, dog, 12876
- Bile ducts, extrahepatic, absence in**
Hydras, 704
 induced proliferation in adult rabbits, 5907
 obstruction, effect on blood phosphatase, 10858
 primary carcinoma, 7854
Bilharzia. (See *Schistosoma*.)
 bronchial allergy due to, allergic nature, 15149
Bilharziasis. (See *Schistosomiasis*.)
 Bilirubin. (See under *Bile, pigments*; *Pigments*.)
 Billings, John Shaw, biography, 15, 20, 22, 24
 Bindweed, control, Na vs. Ca chlorate, 10200
- Bioassay, *Daphnia* as test object, 4162
 micro-apparatus and micro-method, 213
 standardization, 6069
 of substances inducing secretion in digestive-tract glands, 222
 Biochemistry. (See *Chemistry, biological*.)
 Bioclimatics, book, 8980
 Bio-ecology, book, 12564
 Bioelectric current. (See under *Electric potential*.)
 Bioelectric phenomena, discussion, 5425
 Biogenetic law. (See *Recapitulation*.)
 Biologicals, contaminants in, detection as influenced by agar conc., 8259
 dehydration and preservation method, 6048
 phenol adsorption by protein in prep., 4651
 preservation by alkyl-dimethyl-benzylammonium Cl., 13571
 from frozen state by chemical desiccants, 4507
 sterilization of thermolabile, in presence of bactericides, 8283
 Biological control, breeding vars. of cotton favorable to, 5034
 of brewery infections, 17403
 of horse nematodes, by fungi, 14172
 of insects. (See *Insect pests*.)
 of tick-borne diseases, 11707
 of water rats, Guiana, 8459
 Biological fluids, acetone detn. in, 12643
 osmotic pressure detn., 7291
 Biological form(s). (See under *Plant, diseases, resistance to*; *Races*.)
 Biological material, iron in, detn., 3582
 lead in, detn., 1915, 1923
 Mn in detn., 1941
 Rb and K in, detn., 5482
 Biological measurements, rapid evaluation of errors, 7794
 Biology. (See also *Botany*; *Science*; *Zoology*; etc.)
 of abnormal behavior, 10673
 application of law of mass action in, 5433
 books, comparative cost, 5279
 of cell surface, book, 7091
 chance, problem in medicine and research, 14321
 concept of purpose in, 5255, 12461
 exptl., biophysics and, 1664
 of the future, book, 3416
 genic and hormonal factors in, 16601
 history, 10698
 and rôle of mathematics in, 12462
 human, contribution of laboratory rodents to, 8882
 present trends, 3486
 lab. manual, 10690
 literature, indexing by means of symbols, 14336
 marine, book, 10832
 medicine and, book, 14322
 outline, book, 14320
 philosophy, 12461
 essays, 8869
 and probability, 5938
 quantum, examples and nature, 8868
 relation to engineering, 8881
 to Marxism, book, 5256
 to religion, 1662
 secondary text, 8873, 8874
 separation of isotopes in, 7069
 textbooks, 5269, 8879
 in USSR, 7073
 Bioluminescence. (See *Fluorescence*; *Light*; *Luminescence*.)
 Biometry. (See also *Agriculture, experimentation*; *Curves*; *Error*; *Frequency*; *Probable error*; *Probability*; *Sampling*; *statistical methods*, under *Statistics*; *Populations* (statistical).)
 applications in life-history studies in entomology, 3476
 in bacterial population estimation, 2762
 curves, time-action, effect of pH on *Strongylus*, 15975
 methods of evaluation of salivary analysis, 7525
 textbook, 14379
 Biophotometry, for color matching, vit. A as affecting ability to use, 5876
 Biophysics. (See under *Physics*.)
 Bios. (See also *Growth, accelerators*; *Vitamins*.)
 activity, compared with wound hormones, 1359
 biotin, effect on:
 growth, fungi, 12065
- growth and peritheciium formation of fungus (*Melanospora*), 4736
 mycorrhizae, 12078
 brewing and, 6258
 discoverer and history, 1377
 effect on:
 legumes, 2742
 nodule bacteria, 2742
 yeast, differences in strains, 15738
 relation to vitamins, chem., 6571
 in wheat cells, winter vs. spring vars., 13806
 in yeast, factors affecting, 8569
 Biota. (See also *Community*; under habitats and formations, e.g., *Bog*, *Forest*, *Stream*, etc.)
 Bipalidae (Platyhelminthes), p.1869¹
Bipalium (p.1869¹) *costaricensis*, 10541
Biplanispira (p.1868²) *absurda* (E), Borneo, 14203
 Birch. (See also *Betula*.)
 injury due to June beetle, Finland, 12201
 sterile *Poria* on, 15439
 Bird(s). (See also *Aves*; *Ornithology*.)
 anomalous artery in kingfisher, 9775
 avifauna of Savannah Valley (Georgia), 1890-1937, 5190
 of Australia, 3427, 10648
 ectoparasites, 6706
 banding, blood parasite data and, 17901
 data, from England, 14296
 effect on affecting age records, gannet, 14304
 history, 14330
 of Pacific gulls, 5207
 records, Belgium, 16067
 Europe, 16068, 16104
 recovery data for banded marsh birds, U. S., 6993
 for Europe, 6997, 6999
 for Herring Gull, U. S., 7006
 results with blue jay, 12440
 in Europe, 12438
 behavior, avoidance of trees exposed to earth rays, 14389
 in captivity, Japan, 8851
 courtship display in common tern, 8842
 polygyny, polyandry, and promiscuity in, sex ratio as affecting, 10642
 bill formation in pachyptila (=prions), 5183
 bill, horny excrescence, amino acid comp., pelican, 5447
 black brant, census in California, 3588
 blood cells, origin, 5882
 blood vessel distr. in pecten, 7029
 body fat of sea, 7445
 breeding census, of gannets, 163
 168, 169
 breeding ecology of bishop birds, 165
 of British Empire, 16098
 of Canal Zone, 1674
 in captivity, Japan, 8851
 capture by snares, Japan, 8851
 carrying their young, 5175
 cerebral cortex in ostrich and emu, comp. study, 11390
 coccidiosis, chemotherapy, 15200
 conservation. (See *Conservation*.)
 of Denmark, list, 5180
 destruction on highways, book, 10825
 development of nasal cavity, 4383
 display in blackcock, territory as affecting, 14295
 domesticated, *Capillaria* lesions in, 12263
 of eastern and central N. America, field guide, 12439
 eggs. (See also under *Eggs*.)
 serol. differentiation of spp. by antigens, 17202
 of England, popular ecology, 10683
 erythrocytes, development, 15004
 size, 667
 feather structure as tax. character, 18080
 fertility and longevity of terns, 5413
 fish-eating, as carriers of fish parasites, 8687
 control, effect on salmon population, 12632
 flight, frequency of wing vibration, humming birds, 14303
 flowers as food, 10640
 food habits, *Colinus*, 9066
 kingfisher nestlings, 170
Mergus, 5424
 N. American diving ducks, 9065

Bird (continued)

- food habits (continued)
 partridge chicks,164
 starling,18072
 game, chicks, Japan,8851
 eggs, Japan,8851
 grit requirements,5423
 of historical Scandinavia,9071
 take, in relation to land use, Connecticut,14436
 gynandromorphism and lateral asymmetry,7113
 heart wt. vs. body wt.,670
 helminths, diagnosis technic,10501
 inner ear, sensory areas, comp. anatomy,11382
 intermittent breeding, in sea birds,18084
 intestine, histophysiology in herons,4359
 kidney, glomerular tuft, cyst formation in,11460
 life history of sage grouse,9067
 limicoles, biology and habits,16073
 little friar, life history notes,10643
 longevity,8826
 of Louisiana,1646
 book,7020
 of Luzon, habits, nests and eggs, 1653
 lyre, Australian, book,16084
 malaria, (See *Malaria, avian*)
 marine, blown inland by storms, Alaska,7002
 marking,18083
 metabolism, book,3663
 migration, (See also *Migration*)
 of American, book,16082
 and breeding dates, New Brunswick,10645
 in gannet, age as affecting,14304
 low temp. as affecting, Europe, 8830
 over Swiss Alps,16086, 16087
 along rivers, Hungary,18069
 mites, as typhus vectors,984
 nesting data, Finland,8832, 8833
 of Northern Rhodesia, annotated list,7033
 nose picking cannibalism in quail, control,9063
 nuptial plumage, aging,8834
 olfactory and accessory olfactory formations, nuclear configuration,15011
 parasites, Alaska,1564
 passerine, testicular change with season,7581
 pathogenicity of *Toxoplasma* for,12269
 pecten, anatomical studies,7028, 7029
 photography,7064
 plumage, pattern, control by pigmentoblasts, in graft hybrids,8947
 pneumatic system of pelican,5196
 population, after afforestation,161
 census in Rhodesia,171
 seasonal changes in quail, California,10818
 sp. increase in gannets,163
 of woodland clearings,1880
 predatory and scavenger, in epidemiol. of sylvatic plague,15311
 of prey, pellets, bones of *Dicrostonyx* spp. in Greenland,10667
 psittacosis-susceptible,954
 raptorial, effect on population densities of birds and small mammals,6990
 reared in captivity, Martin,18057
 relationships, precipitin test in detn.,6117
 respiration,14604
 of Rhodesia,5206
 rôle of dominance in social life,18076
 of Rumania, identification,5173
 sex characters,7012
 sex and reproduction, book,1643
 sleep and night songs,8841
 of So. Australia,5204
 stomach analysis of rare or extinct N. American,9064
 of Siam and Malay Peninsula,1648
 of Taimir,7024, 7025
 trachea, types in cranes and swans, 705
 tuberculosis in, (See *Tuberculosis, avian*)
 urea formation, arginine and,9397
 valves in venous anastomosis, types,11381
 wading, key,5200
 waterfowl, botulism outbreaks in, 17388
 development of feeding grounds,9070
 distr. and prevalence, Finland,5419
 ecology and management, blue winged teal,10815

Bird (continued)

- waterfowl (continued)
 nematode parasite,3246
 refuges for migratory,9069
 weight fluctuations throughout year, significance,7018
 of western N. America,16132
 wild, blood parasites,17901
 food plants, utilization, book,3537
 of Yellowstone, Wyoming,13
 Birth(s). (See also *Fetus; Infants; Litter; Parturition*)
 certificates, value of data in health work,8284
 factors associated with death at, 11112
 multiple, (See also *Twins*)
 in cattle,11483
 in sheep and goats,17079
 order, effect on seriatim growth in body wt., infants,5796
 O₂ saturation of blood during, sheep,3615
 process in monkeys,12643
 rate of Wellesley college graduates,8959
 still, familial susceptibility, man,14375
 weight, vs. dam wt., horses, cattle and carabao,17080
Biscirus lapidarius, population study, 1832
 Bismuth, compounds, effect on *Spirochaeta pallida* in vitro,816
 spirochaetocidal action, factors affecting,13178, 17244, 17245
 iodochloroxyquinoline, toxicity and excretion, rabbit,16816
 thioglycollate, Na, effect on malaria,7803
 Bison, near Gulf of Mexico,5240
 in Utah,5230
Bitis (p.1880⁴), neutralization of *Bothrops* venoms by antivenene of,4467
gabonica, bite of,10633
 Bitterling, ovipositor, progesterone and estrogen as affecting, 9293, 13030
 Bittern, American, *Giardia* in,6773
 Bitters, effect on gastric mucosa,531
 Bitumen, chlorophyll in, relation to origin of sediments,14155
 Biuret, bacterial decomp.,13713
Biviscula (p.1869⁴), n. spp.,6803
BIVESCULOIDES (Platyh.) (p.1869⁴)
 atherinae,6803
BIZARRIFRONS (Malloph.) (p.1875²), n. combs,8797
 Black death, (See *Plague*)
 Black scale, fixation methods,14110
 Blackberry(ies), (See also *Rubus*)
 stamen blight (*Hapalosphaeria*),17762
 Blackbird, red-wing, malaria in,6733
 Blackfly(ies), (See genera of Simuliidae, e.g., *Simulium*)
 Blackhead, in turkey, (See also *Histomonas meleagridis*)
 blood changes during,10494
 a complex infection,16905
 Blackleg, (See *Clostridium chauveii*)
 Blackman, V. H., portrait,7075
 Blackroot, of sugar beets, B as affecting,13841
 Blacktongue, (See also *Pellagra; Vitamin B.*)
 canine, blood V factor in,12643
 nicotinic acid as affecting,2063
 nicotinic acid amide as affecting,16919
 vit. B, nicotinic acid, and riboflavin deficiency in,8726
 cozymase therapy,16512
 -producing diets, deficiencies in,9228
 Blackwater fever, spleen puncture in, value,6727
 Bladder, urinary, (See *Urinary bladder*)
Blakea (p.1866³), n. spp.,2827A
2828A, 6437, 17526
Blarina (p.1882²), anatomy,4310
brevicauda talpoides, albinos in,14312
Blastenia (p.1862³), n. spp.,6364
BLASTOARTHROSPORINEAE (p.1863³), new suborder of Thallosporeae,4645
 Blastobasidae (Lepidoptera), p.1877²
Blastocladia (p.1861³) *pringsheimii*, life hist.,11810
 Blastocladaceae (Fungi), p.1861³
Blastocystis, with *Chilomastix*, in man, 1547
 intestinal foci in man and animals, 973
Blastodendron krausi, from homemade bread yeast,4646
Blastomyces dermatitidis, lipids,17324
 American blastomycosis due to, 11648
 cell and colony variation in,11646
 mouse infection by mycelial vs. yeast forms,967

- Blastomycosis. (See also *Chromoblastomycosis*; under organisms causing blastomycosis, e.g., *Cryptococcus*, *Monilia*, *Saccharomyces*, etc.)
 American, case reports,8250
 immunological relations,11648
 case report, Argentina,13621
 cutaneous, (See *Dermatosis*)
 mouse infection by mycelial vs. yeast forms,967
Mycotorula albicans associated with, 4636
Blastospora (p.1862²), tax.,1076
Blastus (p.1866³), n. spp.,15505
Blatta (p.1875³), (See also *Cockroach*)
orientalis, *Balandium* from,3265
 life history and growth,14276
 temp. and humidity relations,3484
Blattella germanica, growth rate,12833
 Blattidae (Orth.), p.1875⁴, (See also *Cockroach*)
 Bleaching powder, (See *Hypochlorite, calcium*)
Blechnum (p.1863¹), n. spp.,1097
4757, 8421
 Bleeding (animal), (See also *Hemophilia; Hemorrhage*)
 time, factors affecting, rabbits,11329
 vit. K and bile salts as affecting,11330
 Bleeding (plant), (See also *Guttation*)
 of latex, effect on osmotic pressure,6626
Ficus,6626
 Blennidae (Pisces), p.1880⁴
 Blennorrhoea, inclusion, exptl. studies,4594
Blepharipoda occidentalis, muscles, innervation,5702, 8063, 8064
Blepharis (p.1867²), n. spp.,15483
Blepharisma (p.1868³), conjugation, relationship to size and nutrition,3260
undulans, macronuclear reorganization,8724
Blepharisperrum (p.1867⁴), n. spp., 15483
 Blepharoceridae (Diptera), p.1877²
 Blepharoplast, (See also *Centrosome; Flagellum; Cilium*)
Blighia sapida, toxicity, fat content and maturity as affecting,6550
 Blind spot, (See under *Eye, retina*)
Blindia (p.1863²) *stricta*, trans. to *Verrucoidens macrosporus*,11844
 Blindness, (See also *Eye; Hemianopia; Vision*)
 caused by ethyl alcohol,2387
 in cave isopods,5126
 day, measurements,13062
 night, therapy with vit. A,4266
Blissus leucopertus, (See also *Chinch bug*)
 Collops as predator on eggs,5066
 Blomqvist, Anton Gabriel, biography,3429
 Blood, (See also *Anemia; Body fluids; Bone marrow; Circulation; Erythrocytes; Hemoglobin; Hemolysis; Leucemia; Leucocytes; Lymph*)
 absorption of red and u.v. light by OO-saturated,7361
 acetone bodies, in cattle and foxes, vit. relations,2692
 detn.,5645
 as influenced by:
 adrenalectomy, rat, 10903, 12972
 ant. pituitary extracts, adrenal-ectomized rats,12643
 diet, ewes,3698
 after parturition, sheep,5511
 in pregnancy and parturition,9432
 acetylcholine in, crayfish,11084
 possibility,9141
 acetylcholine-like substance in after eserine poisoning,14666
 acid, retention, retention coefficient and,7340
 volatile, detn., alcohol ingestion and,10904
 acid-base balance, (See *Acid-base equilibrium*)
 activator for peroxidase action of Hb,14511
 agar, in diphtheria bacillus typing, 6202
 albumin, (See under *Blood, proteins*)
 alcohol in, detn.,1922, 9117
 after ingestion and exercise,276
 insulin and glucose as affecting,12643
 alkali reserve, (See *Alkali reserve*)
 amino acids, detn.,10871
 amino N, conc. in parts of vascular system,10921
 ammonia, ammonium salts and NH₄OH, as affecting, dog,16351
 detn.,10866
 review,7245

Blood (continued)

- anti-hemolytic factor lack in hemolytic anemias, 639
- in plasma, pig., 640
- anti-N-immune sera, production of highly potent, 4586
- apparatus for collection and withdrawal from guinea pig, 8274
- ascorbic acid, achlorhydria and, 2388
- Batavia, 328
- in cells vs. plasma, 329, 7876
- detn., 1960, 7307
- diet and, man, 9287
- domestic fowl, 11510
- in essential thrombopenia, 5834
- in fetal, 419
- as influenced by:
 - bananas in diet, 16825
 - fever, 3732
 - vegetative nervous system, 3642
 - path. of adrenal glands and, 7897
- asphyctic, oxidation and reduction, 10395
- O₂ saturation curve, 3624
- bacteria in. (See *Bacteremia*.)
- bactericidal action, as influenced by:
 - bleeding, 9843
 - optochin therapy, 9893
 - sulfanilamide, 15196
 - ultraviolet, 926
 - vitamin-B, 2516
 - vitamin-E, 2517
- bacteriophage absorbed by, saponin and glycerin as affecting, 953
- bank, methods, 7326
- bases, urine bases and, 13012
- bilirubin. (See *Bile, pigments*.)
- bisulphite binding substance, pyruvates as affecting, 9628
- bromide, hypophysectomy and hormones as affecting, dog, 12986
- bromide and chloride distr. between tissues and, 16381
- buffer alkali in, detn., 1935
- calcium, detn., 16378
- as influenced by:
 - adenoma of parathyroid gland, 586
 - calciferol, thyroparathyroidectomized rats, 11024
 - diet, dog, 14521
 - estrogens, fowl, 3787, 3883, 5517
 - exercise, dog, 12652
 - factors, 13178
 - intestinal absorption of P, 16566
 - labyrinthine stim., rabbit, 451
 - metrazol and camphor, rabbit, 13157
 - parathormone, 9339
 - temp. in laying hen, 15114
 - vitamin D, 16588
- after intravenous CaCl₂, heart changes and, 4078
- during pregnancy, man, 3959
- strophanthin, sensitivity and, 4114
- in tetany of newborn, 2344
- in urinary lithiasis, 5504
- in cancer and uremia, effect on yeast fermentation, 5516
- carbon dioxide. (See also *Blood, gases*.)
- in anemia, 2389
- decrebration as affecting, dog, 9272
- effect on carotid sinus, 14754
- in normal and pregnant decerebrate cats, 3651
- transport, dogfish, 8629
- review, 14501
- carotene, dairy cattle on winter vs. pasture ration, 17085
- detn., 14483A
- catalytic power, in rheumatic fever and hyperglycemia, 9609
- short waves as affecting, 1898
- cells. (See *Blood cells* following.)
- cerebrospinal fluid barrier, 641, 2394
- cerebrospinal fluid barrier. (See *Hemato-encephalic barrier*.)
- chemistry, vits. as affecting, 2572, 2573
- chloride, adaptation to stimuli, 2332
- in *Amantia* poisoning, 1980
- detn., micro, 9110
- distr. between erythrocytes and plasma, in adrenal insufficiency, 12751
- as influenced by:
 - adaptation syndrome, 12643
 - cortical extract, 3850
 - damaging agents, thyroidectomized rats, 7381
 - low, alkalosis and, effect on gastric juice, 12897
 - in ocular diseases, 13067
 - after test meal, gastric acidity and, 12887

Blood (continued)

- cholesterol, in allergies, 6028
- in cholesterol-fed guinea pigs, 13263
- decreased, in pancreatitis and carotitis, 14755
- detn., 3645, 4248, 7335, 9131, 16335
- high, heart diseases and, 2274
- as influenced by:
 - aging, 13501
 - hypophysectomy, thyroidectomized dogs, 12643
 - infra-red, 5468
 - injection of gum acacia in bile fistula dogs, 16448
 - splenic hormone, 4254
 - thyroidectomy and feeding, 14635
 - in irradiated cancerous rats, 11290
 - during menstrual cycle, 7596
 - in normal vs. diseased animals, 8329
 - during pregnancy, human, 7582
 - in rheumatism, 642
 - variations, man, 1996
 - in xanthoma, in rabbits, 14905
- chromic index as a test of glycolytic insufficiency, 3625
- circulation. (See *Circulation*.)
- coagulated by acid, alkali or heat, diphtheria bacillus growth inhibited by, 9847
- coagulation. (See *Blood coagulation* following.)
- collection and withdrawal, apparatus for, 8274
- colloidal properties, book, 10329
- osmotic pressure. (See *Blood, osmotic pressure*.)
- composition, analyses, 12714
- in arteriosclerosis and hypophyseal dysfunction, 5862
- in botulism localities, sheep, 15389
- in camel, and working ability, 9803
- in goat, 14507
- as influenced by:
 - age, gestation and lactation, cattle, 13036
 - anesthetics, 508
 - ant. pituitary extract, 378
 - desoxy-corticosterone acetate, in Addison's disease, 14978
 - ether and cyclopropane, dog, 11220, 11219
 - exercise, dog, 10918
 - in schizophrenia, 12798
 - fever therapy, in leprosy, 257
 - lymph heart destruction, frog, 16406
 - minerals in food, pig., 14548
 - old age, man, 16443
 - recurrent hemorrhage, 1955
 - scorpion venom, 11215
 - vit. C, in pregnancy, 12859
- withdrawal of ascitic fluid in liver cirrhosis, 7886
- properties and, *Prodenia*, 244
- review, 7245
- in trichinosis, therapy as affecting, 6751
- in yaks, cattle and their hybrids, 8854
- copper, in exptl. fever, rabbit, 12880
- in fetal and maternal, 426
- in fish and fowl, 12827, 12828, 12829
- as influenced by thyroidectomy, 10919
- by thyroxine, thyroidectomized rabbits, 12825
- count. (See under *Blood cells*.)
- creatine, detn., 7288
- postmortem, as index of kidney damage, 1966
- culture, in diagnosis of tumors, 2358
- in Hodgkin's disease, 13248
- in infectious mononucleosis, 5824
- cystine and cysteine, in heart overstrain, 16748
- depot in chest, effect on lung volume, 16572
- differentiation by precipitin test, 6117
- diglycerophosphate, decomp., 16431
- diseases, clinical atlas, 645
- distr. in shock, dog, 9145
- electrolytes, in adrenal insufficiency, 5854
- diffusion into peritoneum parathormone as affecting, 3798, 3799
- disturbance, effect on resistance to histamine poisoning, rat, 10846
- as influenced by artificial fever, 5657
- by pitressin, diabetes insipidus and adrenal insufficiency, 12643, 14981
- insulin convulsions and, 2388

Blood (continued)

- enzymes, in avitaminosis A and B, 11347
- catalase, as influenced by supersonic waves, 12674
- by thawed and distilled water, 9090
- cholinesterase, 9141
- detn. and significance, 12717
- in diseases, 7553, 13178
- in myasthenia gravis, 13178
- during parturition, 9424
- prostigmin and guanidine as affecting, 14458
- codehydrogenases, in diabetic acidosis, 5841
- nicotinic acid as affecting, in pellagrins, 4265
- diaphorase, 16311
- diastase, 10915
- glycolytic and glycogenolytic, in psychotic and normal humans, 3559
- lipase, 16429
- in pancreatitis, 1953
- phosphatase, 1977, 2082, 5504
- 14870, 14872, 16439
- after bone fracture, 5707
- during egg cycle, fowl, 2510
- as influenced by hepatic and biliary disorders, 10858
- by jaundiced serum, 12643
- in leucemias, MgCl₂ and, 11274
- in liver disease, 12900
- in perotic chicks, 3567
- during pregnancy and lactation, 3959, 14689
- epinephrine, in scurvy, thyroidectomy and, 16918
- in ultrafiltrate, 9337
- epiphyllate capacity in vitro, 13436
- exam. for parasites, technic, 14164
- extracts, effect on blood pressure and vessels, 14853
- fat, distr., acid-base balance as affecting, 7356
- on fat free diet, man, 7436
- in heart-lung prep., 3686
- high, induction in cock by means of estradiol, 5517
- fibrin. (See under *Blood, proteins*.)
- fibrinogen. (See under *Blood, proteins*.)
- films, basophilic staining, 9713
- filter, for transfusions, 16392
- findings, in nutritional edema of children, 2350
- flow. (See *Circulation*.)
- fluorescence studies, 14489
- formation. (See *Hematopoiesis*.)
- formed elements, physiology, review, 7244
- fructose. (See under *Blood, sugar*.)
- gas(es). (See also *Blood, carbon dioxide; Blood, oxygen*.)
- binding curves, 1971
- exchange, speed, 14597
- fetal respiratory movements and cat, 3977
- spinal anesthesia as affecting, 254
- tension detn. in mixed venous specimen, 12724
- transport, opossum, 1985
- globulin. (See under *Blood, protein*.)
- glutathione, detn., 16370
- in rheumatic fever, 7885
- S preps. as affecting, 16408
- in thyroid disease, dog, 9649
- in young animals, 10958
- glycogen, glucose, insulin, or adrenalin as affecting, 7843
- injection, leucopenic effect, rabbits, 550
- glycolysis. (See under *Glycolysis*.)
- glycoprotein complexes, linkages, 7373
- groups. (See *Blood groups* following.)
- halogens and thiocyanate in spinal fluid and, 13178
- hematology, books, 9682, 13291
- standards, 7292
- hemocuprein in, 5509
- hemolymph, combined sugars in, *Cancer*, 12747
- osmotic pressure and Cl conc. in mosquito larvae, 3655
- hemolysis. (See *Hemolysis*.)
- hemolytic principle in demonstration and properties, sheep and horse, 13445
- heparin in, after inj., 8638
- histamine, detn., 12643, 12713
- distr. in, 14493
- as influenced by:
 - anaphylactic shock, 14498, 14499
 - embolism, 16438
 - peptone shock, 5514
 - sex difference, rat, 256

Blood (continued)

- of holothurians and ascidians, V content, and origin of V deposits in sedimentary rocks, 14155
- hormones, androgens in, man, 3860
- corpus luteum, pregnant rabbit, 3618
- estrogenic, absorption spectrum, 16436
- in dysmenorrhea, 4273
- during labor, 2171
- after menopause, 14645
- estrogenic and gonadotrophic, assay method, 7600
- effect on lipid metabolism, bird, 3697
- extraction, pregnant mare, 10870
- in pregnant mare, 3791, 4283
- iodine, detn., 5675, 16930
- luteinizing, extraction and assay, rat, 214
- melanophore, tumors and, 4221, 4222
- of human races, antigenic specificity, 11563
- pH. (See also *Acid-base equilibrium; Acidosis; Alkali reserve; Alkalosis.*)
- acclimatization to low atmospheric pressures, dog, 7531
- in acquired syphilis, 16410
- in anemia, 2389
- in circulating venous blood, 16409
- detn. intravenously with hemometer, 7355
- fresh water fish, 7371
- pH of cerebral cortex and, 4013
- as influenced by:
 - bleeding, 9843
 - Ca or Na gluconate, 4119
 - Ca salts, 13178
 - CO₂ tension of water, fish, 370
 - exptl. shock, 12755
 - gluconic acid, 4120
 - insulin, 7664
 - lymph tissue, man, hedgehog, 1967
 - method of raising or lowering for a considerable period, rat, 12643
 - in thyroid- and parathyroidectomized dogs, 9156
- immuno- and chemical cataphylactotransfusions, 13436
- incompatibility, mechanism, 2554
- inulin, detn., 1936, 5480
- iodine, acetone fractionation, factors affecting, 16336
- detn., 214
- distilling vs. dry ashing methods, 9120
- in mother's and umbilical cord blood, 9423
- nature, 7388
- in nodular goiter, 4288
- reserve and hormone iodide in, B. M. R. and, 9154
- iron, detn., 1914
- in fetal and maternal, 426
- during pregnancy, human, 14676
- ketone bodies. (See *Blood, acetone bodies.*)
- lactic acid, detn., 3586
- in glycogenolysis, 16487
- as influenced by:
 - adrenalin, 16413
 - muscle activity, 11152
 - pituitary extracts, 11065
 - after rest and exercise in heart disease, 13116
- lead in, in plumbism, 9670
- leucocytic cream, effect on brain, 14982
- lipids, detn., micro, 9112
- differential analysis, rabbit, 10888
- extracts, nitrogenous contaminants in, 16341
- prep. free from non-lipid extractives, 16342
- extraction, soaps as affecting, 12729
- in infantile eczema, 11264
- during infection, pancreas feeding as affecting, 7386
- as influenced by:
 - aging, 13501
 - ant. pituitary extracts, 14630
 - fasting, lactating cow, 305
 - insulin treatment in schizophrenia, 16430
 - lipases, 14456
 - low atm. pressures, 16420
 - pancreatic duct ligation, 12643
 - parenteral liver, lung or splenic cell constituents, 12752
 - in toxic goiter, vs. anxiety states, 9632, 9633
 - vit. A in blood and, 16508
- lipid and glycerides, passage of fatty acids of food into, 7505

Blood (continued)

- literature on, review, 14927
- lysocithin, in pernicious anemia, sedimentation rate and, 5826
- magnesium, in cattle, 248, 1008
- after intravenous inj., 18133
- melanophore stimulating substance, liberation by light, 12643
- microfilaria in, staining technic, 17902
- nicotinamide in, detn., 16365
- nicotinic acid in, detn., 16364
- nitrobenzene in, detn., 7314
- nitrogen, ant. pituitary extracts as affecting, 3880
- in diagnosis of urologic disease, 12810
- distr., 1983
- non-protein, during adaptation to various agents, 12643
- non-protein constituents, 5503
- opsonizing capacity, asphyxia as affecting, dog, 7359
- osmotic pressure, as influenced by:
 - CO poisoning, rabbit, 12760
 - drugs and water, 16811
 - intravenous acacia, dog, 1973
 - O₂ lack, 12761
 - temp. and CO₂ tension, 7301
 - after plasmapheresis, 12749
 - oxalic acid, in anemias, 11327
 - physiology, 16428
 - oxidative capacity in cattle, 15104
 - oxygen. (See also *Anoxemia; Blood, gases.*)
- acclimatization to low atmospheric pressures, dog, 7531
- anoxemia, autonomic nervous system activity during, 9486
- effect on intestinal absorption of MgSO₄, 12907
- after intravenous O₂, 14593
- O₂ pre-breathing as affecting, rat, 7528
- capacity in pregnancy, factors affecting, 2156, 2159
- carrying properties in silver fox, 10909
- changes after venous occlusion, 11205
- combining power, CO₂ and hemolysis as affecting, marine fishes, 10930
- detn., 3589
- dissociation curve, in calf after birth and in maternal blood during pregnancy, 7378
- in pregnancy, man, 2156, 2159
- in reptiles, 10942
- maternal and fetal, factors affecting, cat, 429
- in normal and pregnant decerebrate cats, 3651
- saturation in carotid at birth, 3615
- curve, asphyxia as affecting, 3624
- tension, effect on myeloblasts, 12643
- transport, during work and rest, 1970
- fish, 12643
- mink, 12643
- parasites, in school children, Sierra Leone, 14185
- of wild birds, 17901
- particles in, comp., 7342
- partition of NaCl, glucose and urea between vitreous body and, selacii, 12746
- pathology, dualistic aspect, 9620
- perfusion. (See *Perfusion.*)
- phenol contents, 12767
- phosphate, detn., 10869
- exchange with liver and muscle, fructose and insulin as affecting, 10913
- in hyperparathyroidism of exptl. renal insufficiency, 5857
- inorganic, relation to carbohydrate metabolism, in diabetes, 5852
- phosphatides, detn., 1928
- after liver therapy in pernicious anemia, 641
- in pernicious anemia, 2394
- phosphocreatine in, uremia, 1950
- phospholipid, aging as affecting, 13501
- detn., 16377
- nature of fatty acids, 7347
- phosphorus, compounds, hydrolysis in vitro, 12680
- in domestic and wild animals, normal and pathologic, 10933
- during egg cycle, fowl, 2510
- in fowl, 1977
- in health and disease, 11325
- in infants, relation to rickets and u.v. rays, Egypt, 2348
- as influenced by:
 - adenoma of parathyroid gland, 586
 - age, dairy cattle, 1972

Blood (continued)

- phosphorus (continued)
- as influenced by (continued)
 - parathormone, 9339
 - pituitary and urinary gonadotrophin, hen, 3855
 - subcut. formalin, cold, and exercise, rat, 16424
 - in rickets, 2085
 - seasonal variations, children, 14872
 - in urinary lithiasis, 5504
- phyllactic qualities of preserved, increase in, 13436
- physical properties, supersonic waves as affecting, 12674
- physico-chemical constants, NaBr as affecting, dog, 10929
- picture. (See *Blood picture* following.)
- pigments. (See also *Hemoglobin; and under Pigments.*)
- urobilinogen, detn., 1982
- plasma, equine, sinus tract pus and emulsion as affecting, 17151
- gel, diffusion analysis, 1885
- loss in guanidine poisoning, factors affecting, 7785, 7786
- osmotic relationship between interstitial fluid and, 11086
- oxalated, preservation for fibrinolytic tests, 15155
- physiology, review, 7244
- renal hypertensive, effect on surviving arterial rings, 11206
- specific gravity, control of fluid admin. in fever and, 7334
- platelets. (See *Blood platelets* following.)
- polypeptide in, 7344
- conditions affecting, 16411
- after urological operations, prognostic value, 10936
- porphyrins, detn., 7313
- portal, bacterial flora in relation to exp. intestinal occlusion, 13614
- bile acid content, 7332
- potassium, Ca ratio, diet as affecting, dog, 14521
- conc. in cardiac blood at death, 10934
- detn., 12718
- as influenced by:
 - adrenal cortex, dog, 3865, 3866
 - asphyxia, 1956
 - epinephrin, 12762, 14497
 - exercise, dog, 12652
 - hemorrhage and transfusion, 16426
 - hypertonic KCl and cortical extract, adrenalectomized cats, 7389
 - K-deficient diet, rat, 14745
 - in muscle and, in relation to activity, 12643
 - in rat trypanosomiasis, 5097
- preserved, changes in, 3626
- pressure. (See *Blood pressure* following.)
- protamine-splitting properties, 7346
- proteases of tissue in, in starvation, dog, 5442
- proteins. (See also under *Blood serum.*)
- albumin, carbohydrate and lipid content of fractions, 5508
- crystals isolated in myeloma, 1954
- crystalline, antiserum specificity, 17117
- detn. filter paper adsorption of protein as affecting, 7349
- diffusion and viscosity, urea as affecting, 7369
- restoration after plasmapheresis, 12749
- sedimentation and light absorption, u.v. and soft x-rays, 5510
- albuminous substances in pathological serum, 16405
- antibody-globulin, hydrogen-ion adsorption by, 802
- in arterial hypertension, 14756
- complement relation to in various spp., 2571
- conc. in infants and children, 561
- crystalline Bence-Jones, in myeloma, 14901
- detn., 3580, 7303
- of fractions, 9127
- by gasometric C analysis, 9124
- glass bead method, 1912
- effect on Takata reaction, 3652
- estimation, 1992
- euglobulin, affinity for amylose, 7372
- fixation of added coloring matter to, 10917
- precipitation test for malaria, 14194
- tyrosin test for, in malaria, 6753

Blood (continued)

- proteins (continued)
 euglobulin and pseudoglobulin detn.
 in normal and pathologic.3637
 fibrin. (See also *Fibrin*.)
 catalase action.14449
 coagulum, study in relation to
 subacute endocarditis, 483
 fibrinogen. (See also *Fibrinogen*.)
 thrombin reactions, factors af-
 fecting.9857
 fibrillar-colloid state, blood con-
 gulation and.12771
 formation.7387
 formolgel reaction for.11655
 formolized, specificity.17155
 fraction, non-gel-forming, colloidal
 dyes fixed by.18413
 fractionation during immunization.
4483
 globulin, in anticomplementary serum,
 in myeloma.4249
 of avian, in Wassermann and
 flocculation tests.6078
 derivatives, chem. properties.
17139
 fractions, Takata-Jezler and
 Mancke-Sommer reactions
 and.3627
 fractionation technic.8132
 high, in lymphogranuloma in-
 guinale.11619
 hydrogen-ion adsorption by.802
 immunological fractions.8132
 partition, goat.7376
 precipitation by Na_2SO_412764
 in Wassermann and flocculation
 tests.6078
 as influenced by:
 acacia.1973, 7819, 16448
 CO poisoning, rabbit.12760
 hypertonic NaCl10932
 intravenous saline.12643
 O_2 lack.12761
 protein diet.1998, 1999
 trypanosomiasis.1552
 vit. C, in pregnancy.12859
 x-ray and u-v.5457
 low, cases.2393
 in chronic pemphigus and edema.
4242
 in lymphogranuloma inguinale.16914
17334
 metabolism of intraperitoneally in-
 jected, rat.9186
 mol. wt., in nephrosis.16645
 passage into joints and other body
 cavities from.14495
 precipitation by $(\text{NH}_4)_2\text{SO}_4$, marine
 vertebrates.12765
 production, amino acids as affecting.
 dog.9155
 prothrombin, as influenced by:
 cholic acid of vit. K.14568
 hepatectomy.259
 transfusion.16418
 level in vertebrates.3654
 rôle of liver in formation.16441
 pseudoglobulin, hydrogen-ion adsorp-
 tion by.802
 rapid specific gravity detn. as indi-
 cator.16369
 relation to toxemia of pregnancy.
2158
 removal, agent for.3583
 replaced by acacia in frog.258
 in rheumatoid disease.10935
 separation by electrophoresis, rat.
7351
 sugar, detn. and components.16400
 during suppuration.16554
 thrombin, detn.12716
 tyrosin index, in malaria diagnosis.
 technic.6753
 "viscous protein" of globulin, 10898
 pulsation rate, *Euxoa detera* larvae.
17652
 pyruvic acid, detn.7306
 radium in after injection.3572
 reducing substance, non-fermentable,
 chicken.7337
 regeneration. (See *Hematopoiesis*.)
 sedimentation. (See under *Erythro-*
cytes.)
 sensitivity reactions to drugs.522
 serum. (See *Blood serum* following.)
 shed, effect on hemolytic streptococci,
 factors affecting.8115
 smear, vs. spleen puncture, in malaria
 diagnosis.6727
 staining.1584, 8702, 8716
 snake, hemagglutinins.4534

Blood (continued)

- sodium, cortical extract as affecting.
3850
 detn., P removal in.14482
 distr. between aqueous humor and,
 cat.14500
 source, effect on sedimentation rate,
 guinea pig.11324
 specific gravity detn., as indicator of
 protein content.16369
 spectrum, sulfanilamide as affecting.
11261
 -stains, identification by blood groups.
17230
 storage, site, man and dog.1987
 in spleen.1987
 sugar. (See also *Diabetes*; *Glycolysis*;
Insulin.)
 adaptation to stimuli.2332
 in adrenalectomized rats with dia-
 betes insipidus.12643
 detn.7287
 calculation.12712
 -effect on heart involvement in rheu-
 matic fever.1986
 on hearts' usage of pyruvic acid.
7707
 of fasting domestic fowl.12643
 formation, rôle of glucose-1-phosphate
 in.1448
 fructose, detn.5483, 10868
 during pregnancy.1110
 tolerance tests, normal standards.
10906
 glucose tolerance and, transpancre-
 atic diathermy as affecting.
 dog.14509
 high, effect on beta cells of pancreatic
 islets.12750
 on biliary secretion, dog.14576
 emotional, in mammals and rep-
 tiles.9142
 without glycosuria, metabolism
 and.9638
 after liver asphyxia during per-
 fusion.14591
 production by ureter ligation.
14515
 as influenced by:
 acid instillation into duodenum.
11032
 adrenalectomy in diabetes insipi-
 dus, cat.14965
 adrenalin, pituitary extracts as
 affecting.11068
 allergic shock from pollen.13509
 alum precipitated insulin, man.
14850
 ant. pituitary extracts, dog and
 toad.3836, 3837
 As and Sb compounds.7792
 benzedrine.552
 bile acids, rabbit.9147, 9569
 Carlsbad mineral water.2031
 copper, rabbit.7804
 damaging agents, thyroidectomized
 rats.7381
 epinephrine.11225
 insulin and Cu.11255
 exercise.9495
 extracts of human tonsils.13184
13185
 factors, hepatectomized dog.300
 fasting, hereditary dwarf mice.
7360
 fluortyrosin, tumor growth and.
7843
 grape sugar and adrenalin, pel-
 lagrins.14946
 guanylic acid, guanin, adenin and
 cholic acid.12756
 glucose.14539, 16491
 glycine ingestion.12890
 growth hormone.9383
 histamine, cold and formaldehyde.
2332
 HCl instillation in duodenum, dog.
12643
 insulin.8720, 5615, 7896
14863, 16757, 17139
 labyrinthine stim., rabbit.451
 nicotine.18170, 14838
 old age, man.16443
 oxidase of *Cynara*.11246
 pituitary adenoma.11285
 pituitary extracts and diabetic
 urine.11064, 11065
 post. pituitary hormones.3914
 protamine Zn insulin.18136, 18180
 snake venom.18174, 16804, 16805
 sorbitol.7879
 spermine, rabbit.14807
 stim. of sympathetic nerves and
 ganglia.10907

Blood (continued)

- sugar (continued)
 as influenced by (continued)
 stimuli, hypophysectomized rats.
3912
 sympathectomy, dog.10890
 tonsil extracts.12768
 vit. B, and insulin.5559
 zinc insulin.14828
 in insulin shock, vs. cerebral me-
 tabolism.7910
 liver output, factors affecting.361
 low, in acute hypophyseal necrosis,
 puerperal.16927
 in adenomas of pancreas and
 pituitary.14880
 anoxia and.12643
 anxiety and degenerative states
 and.11305
 autonomic nervous system activity
 during.9486
 cerebral cortex potentials during,
 substances of glucose cycle
 as affecting.7663
 in diabetes, medico-legal aspects.
14954
 effect on:
 blood pressure reaction to
 anoxia, dog.7544
 capacity for work and fatigue,
 man.10966
 cerebral cortex and hypothalamus
 electrical activity,
 dog.12643, 13076
 gall bladder disease causing.5500
 hypoglycemic shock and.7430
 syndromes secondary to.2028
 of normal Bengal in relation to body
 measurements.17010
 after parturition, sheep.5511
 post prandial in cancer.14496
 regulation by liver, mechanism.362
 removal, method.3686
 tolerance, cerebral cortex as affecting.
 cat.13069
 curve, in non-tropical spruce.13271
 tests. (See *Carbohydrate*, *tolerance*;
Glucose, *tolerance*; *Sugar*,
tolerance.)
 values, important in insulin shock
 therapy of psychoses.4270
 studies, in anemia in pregnant Indian
 coolie women.644
 sulfanilamide conc. in, man.2320
 detn.9941
 in plasma and cells.7383
 sulfonamide compounds in detn.4576
 sulphate, detn.16376
 sulphur, in globins, mammals.14494
 supply. (See *Blood vessels*; *Circulation*;
Circulatory system; etc.)
 Takata reaction, in various diseases.
14936
 toxicity, x-radiation as affecting.16322
 transfusion. (See *Blood transfusion* fol-
 lowing.)
 trypsin inhibition by.5465
 of tunicates, comp. study.16963
 typing, Ponsold's method.13522, 13524
 sources of error in.13523
 tyrosine, after intravenous admini-
 stration.12643
 u-v. absorption spectra, in schistosomi-
 asis.12251
 urea. (See also *Uremia*.)
 action of liver and kidney arginase
 and.12677
 detn.7300, 16347
 in domestic fowl.10908
 as index of urea in brain and tissues.
3647
 as influenced by ammonium salts and
 NH_4OH , dog.16351
 by glycine and glucose ingestion.
12890
 uric acid, in Bright's disease.3941
 vaccination in vitro.13436
 V factor in normal and black tongue
 dog.12643
 vessels. (See *Blood vessels* following.)
 in vessels, distr., posture as affecting.
16721
 viscosity, as influenced by intravenous
 hypertonic NaCl10932
 by temp.13102
 vits., and carotenoids in Dutch E.
 Indies.316
 vit. A, in assay.5554
 carotene and, detn.3585, 16350
 in pregnancy and lactation.
 Batavia.318
 vit. B, in, detn.5492
 significance.4261
 volatile reducing substances, in diabetes
 and nephritis.9631

Blood (*continued*)
 volume, available fluid vol. and, simultaneous detn., 3634
 from birth onwards in mammalia, 3633
 in cardiac patients, 16437
 changes in dehydration, 12643
 in familial polycythemia, 13262
 and circulation in dog's hind limb, 16734
 conc., serum as affecting, 3630
 detn. by CO method, 5493
 in fingers, respiration as affecting, 3646
 in hyperthyroidism and myxedema, 2267
 importance in heart failure, 4067
 in infants and children, 12643
 as influenced by:
 adaptation syndrome, 12643
 adrenalin, nembutal and sympathectomy, 9148
 ergotamine poisoning, rat, 7345
 ether, 252
 heat, review, 2265
 intestinal obstruction and strangulation, 9139
 intraven. dextrose and sucrose, 11174
 oxygen, 13129
 renal hypertension, dogs, 2268
 in peripheral vascular disease, 16741
 in pernicious anemia, liver therapy and, 13253
 in pregnant sheep, 7575
 in shock, 12643
 water content. (See also *Blood, volume; Water, balance.*)
 S waters as affecting, 7357
 Blood anticoagulants. (See *Blood coagulation.*)
 Blood cells. (See also *Erythrocytes; Fibroblasts; Leucocytes; Lymphocytes; etc.*)
 agglutination. (See *Hemagglutination.*)
 in aleucemic leukemia, myeloblasts, 13259
 of ascidians, 16963
 bacteriophage absorption by, 6159
 circulating mass, in familial polycythemia, 13262
 of cockroach, structure, count, and degeneration, 7935
 counts, in sulfapyridine therapy, 17247
 in normal chicken, 5885
 urease, as affecting, cat, 16796
 examinations, smear prep. for, 17339
 from hemolymph of *Drosophila*, cultivation, 13341
 histogenesis and nomenclature, 7934
 as influenced by acacia, 7819
 by prolonged exposure to high CO₂, dog, 12643
 insect, extrusion of nuclear material, 12513
 morphology in reptiles, amphibians, fish and molluscs, 5884
 origin, development and function in marine teleosts, 16962
 in mammals and birds, 5882
 phosphates in, in rickets, 2085
 production in *Bufo*, 7936
 sickle in deer, 5881
 vit. C in serum and, 329
 Blood coagulation. (See also *Blood platelets; Coagulation; Coagulants; Fibrinogen; Hemophilia; Thrombosis.*)
 accelerating principle in saliva, 3632
 action of trypsin, 14503
 activation by cephalins, 12754
 bleeding time and, rabbits, 11329
 as a colloid- and enzyme-chemical reaction, 12771
 favoring substance for hemophilias, in urine in diseases, 10905
 in gynecologic disorders, 14924
 in hemophilia, study, 255
 as influenced by:
 adrenaline, pectin preps., and spinal medulla extract, 14804
 Ca and thrombine, 1975
 Congo red, rabbit, 10926
 heparin, 3641
 accessory factor necessary for, 7333
 rabbit, 14848
 high atm. pressures, 16404
 lipid in spleen in Nieman-Pick's disease, 1958
 rivanol, 7358
 salmine, 1957
 salt sols. and peptone, 3617
 snake venoms, 875
 venom of *Bothrops atrox*, 5833
 vitamin K, 1961

of layers, in various diseases, 11309
 mechanism, new concept, 12643
 power of crystalline trypsin, Ca, cephalin and, 10902
 promoting factor in serum and placental extract, 7332
 prothrombin and, infants, 11269
 review, 7244
 rôle of fibrin in, 12743
 of phospholipids and trypsin-like enzyme in, 14504
 of proteolytic enzymes phospholipids and tissue extracts in, 12643
 by snake venoms, inhibition and destruction by antisera, 7348
 test, as measure of bleeding tendency in obstructive jaundice, 10944
 thrombin specificity in, 10894
 time, in adrenalectomized rats, 12643
 detn., 236
 apparatus for, 8159
 factors affecting, 13178
 as influenced by:
 hemostatics per os, 5513
 oxalic acid, 16425
 vitamin K, 7390
 newborn human, 12769
 in reptiles, amphibians, fish and molluscs, 5884
 in undulant fever serodiagnosis, 2648
 by venom, review, 14506
 Blood flukes, revision of Spirorchidae, 6788
 Blood groups. (See also *Agglutinins; Hemagglutinins.*)
 A and B, phylogenetic rise and spread, mutation and, 17229
 -A, *Bacillus perfringens* destroying antigen, 6118
 in media not vitating chemical and serological studies of hemolytic streptococci, 17232
 A factor, inheritance, 11568
 in red cells vs. sputa, 934
 relations in man, sheep and guinea pig, 2595
 in sheep red cells, 934
 in sputa, anti-A-sera as affecting, 934
 advances in study, 13527
 agglutinogens, inheritance, 2596
 in American Indians, 15053
 of anthropoids, 9725
 and comparisons, 4535
 antigenic component common to man and sheep, 13517, 13518
 antiserum production and preservation for A, B, M and N, 15168
 of apes, M- and N-agglutinable factors, 933
 -B, *Bacillus perfringens* destroying antigen, 6118
 B-factor, in red cells vs. saliva, 938
 of Bulgarians, 17027
 of chimpanzee, 13526
 complement titers, 17224
 detn., by blood sedimentation, 9903
 on bones of 30 Aleutian mummies, 8011
 in newborn, for clinical and forensic ends, 13522, 13524
 distr. in India, 5934
 enzymes, *Bacillus perfringens* producing anti-enzyme to, 6063
 in Eskimos, 11440
 factors, detn., by blood sedimentation, 9903
 in forensic medicine, 17230
 of gibbon, 13526
 group antigens, in excretors vs. non-excretors, 935, 936
 origin and distr., 935, 938
 in saliva, nature and origin, 939
 in secretions, origin, 938, 939
 water- vs. alcohol-soluble, 936
 group-specific agglutinins for human cells in rabbit sera, 15170, 15171
 group-specific hemolysins, production in rabbit, 2594
 hemolysins for, in pneumococcal antisera, 17234
 hemolytic titers for heterologous erythrocytes, 17225
 heredity, in England, 5358
 human, relation to titers of sheep hemolysin and agglutinin, 13519
 human corpuscles vs. rat sera, 16866
 immune specific M-agglutinins produced in monkeys, 15171
 in rabbit sera, and inheritance of ability, 15170
 isoagglutinin titers, in disease, 7877
 M and N factors, 11567
 in transfusion vs. parental detn., 17230
 M, MN and N, review, 13525

Blood groups (*continued*)
 MN types, of Greenland Eskimos, 17228
 M-antibodies formed by guinea pigs, 2597
 of man-like apes, 13521
 natural anti-sheep hemolysin titers, 17226
 parentage detn. by, book, 13520
 pneumococcal rabbit antiserum admin. and, 17227
 racial classification and, 8018
 racial diagnosis, 13322
 reticulo-endothelial system relations, 9832
 serological demonstration of homozygote and heterozygote A- and B, 932
 of sheep, 13516, 13517
 specific substances in saliva, heredity, 13520
 subgroup A-B with weak A-receptor and irregular agglutinin blood-transfusion relations, 17231
 tests, on stains, mummified tissues and cancellous bone, 15054
 technique, 15169
 in 37 families, upper Italy, 8960
 of Turkish nomads, 937
 type-specific M and N factors in human organs, 17233
 typing, dangers in, 17230
 technique, 11567
 for transfusions, 17235
 of Viennese, 13317
 Blood picture. (See also *Blood cells; Erythrocytes; Leucocytes; etc.*)
 in acute erythromyelosis, 5827
 in agranulocytosis, 14934
 in benzol poisoning, 11323, 13279
 in brucellosis, 1009, 13261
 of cows, normal and parasitized, 12745
 diurnal variation, man, 3968
 in dogs (young normal), 15370
 during pregnancy, man, 7582
 in exptl. *Capillaria* infection, chickens, 9249
 of histoplasmosis, in infancy, 14867
 humoral effects on, 11074
 as influenced by:
 amidopyrine, 4146
 ant. pituitary extract, 378
 avitaminosis A, 10879
 bee venom, rabbit, 13149
 bromide, dog, 10929
 brucellosis, 1015
 chilling of body surfaces, 565
 diethylstilbestrol, 9380
 estrogen, 9279
 hormones, rat, 12933
 nucleic acids, 10900
 piroplasmosis, pig, 12246
 pituitary, 3836
 pregnancy, man, 3968
 stomach worm, rabbit, 10548
 trypanosome infections, 825
 typhoid bacillus toxic extracts, 4532
 vit. C in tuberculosis, 327
 zinc, rat, 270
 in lead poisoning, factors affecting, 9670
 in leucemic lymphoblastoma, calf, 608
 in liver treated typhoid anemia, rabbits, 5828
 in newborn rats, 3621
 parenteral liver extract as affecting, 10891
 in pancreatic dysfunction and exptl. arteriosclerosis, 5862
 in rat trypanosomiasis, 5097
 in trichinosis, rat, 1568
 in turkey blackhead, 10494
 in underweight people, hypophysis and, 14967
 in undulant fever, 10892
 value in management of pulmonary tuberculosis, 10901
 white, as influenced by antimony therapy, 822
 in worm infestations, 14933
 Blood platelets, agglutination by pro-fibrin, 10882
 count, chemotherapy as affecting, 6138
 menstrual cycle and, 423
 in pernicious anemia, 1497
 in purpura, dog, 7887
 decrease, in benzol poisoning, 11323
 lipid distr. in, 1963
 origin, distr. and behavior, review, 7932
 osmotic resistance, 14444
 Blood pressure. (See also *Blood vessels; Circulation; Circulatory system; Heart; Pulse; etc.*)
 in aorta, effect on coronary volume, 7721

Blood pressure (*continued*)

- in aorta (*continued*)
 - heart volume and, 4091
 - intramyocardial pressure and, 4078
 - aortic chemoreceptors and, 13105
 - in aortic coarctation, 488, 12643
 - assay method for post. pituitary ex-
tracts, fowl, 12942
 - carotid, central vagal stim. as affect-
ing, 5725
 - carotid sinus reflex and, CO as affect-
ing, 4080
 - in coal miners, Java, 14758
 - in coronary occlusion, 14760
 - detn., in children, 18192
 - in rabbits, apparatus for, 7325
 - in rats, 7320
 - in diabetes, study, 18101
 - effect on arterial tone, 18118
 - cerebrospinal pressure, 7705
 - exptl. arteriosclerosis and, 5859
 - high, adrenal lesions and, 4092
 - angina pectoris and, in negroes, 18134
 - in aortic dissecting aneurisms medial
degeneration, 14777
 - arterio-venous anastomosis and, 15009
 - blood transfusion and, 9516
 - in Bright's disease, 11190
 - and chronic hypertensive encephalo-
pathy, 11171
 - circulation indices and, 2264
 - circulation time, detn., 9528
 - coronary sclerosis and, 11167
 - depressor nerve section and, 5718
 - development in rheumatic fever,
children, 500, 501
 - in diabetes, protamine Zn-insulin
and, 14976
 - dynamics of circulation in, 504
 - economy of effort, detn., 9536
 - effect on:
 - aorta, 4088, 4099
 - blood volume, cardiac size and
renal function, dogs, 2268
 - electrocardiogram, 9538
 - eyes, dogs and monkeys, 2271
 - essential, types, clin., 5719
 - exptl., adrenals and, 11196, 12643
 - nephrectomy and, rats, 7708
 - reduction, 9524
 - in hydronephrotic rats, renal pressor
substance and, 4100
 - in identical twins, 5353
 - increased intracranial pressure in,
. 16407
 - as influenced by:
 - factors, 503
 - mecholyt iontophoresis, 14829
 - negative aerionization, 9532
 - progressive sympathectomy, 12643
 - yohimbine, 18178
 - kidney function test with Na ferro-
cyanide, 14673
 - malignant, clin., 9527
 - nephritis and, book, 16646
 - obesity and, study, 14782
 - pathogenesis, 2277
 - produced by intracisternal inj. of
colloidal kaolin, 2819
 - by Kieselguhr inj. and splanchnic
stim., 5713
 - by obstruction of aorta, 5711
 - by renal ischemia, 508, 12643
 - eye lesions in, dogs, 2879
 - prognostic significance of S-T in-
terval in, 12643
 - renal, elimination of effect of chem.
mediator, 12643
 - genesis, 11181
 - pulmonary artery pressure in, dog, 12643
 - vasoconstrictor substance and, 7731
 - renal glomeruli and tubules, measure-
ment of number, 12643
 - renal insufficiency and, 2143
 - serum protein in, 14756
 - toxemia of pregnancy and, 5670
- as influenced by:
- alkyl nitrites, 2814, 2815
 - allergic shock from pollen, 18509
 - analeptics, 4171
 - anoxia and asphyxia, 16781
 - anoxia, hypoglycemia and adrenin,
dog, 7544
 - ant. pituitary extract, 378
 - aortic constriction, 9517, 11203
 - barbiturates, 16767
 - benzedrine, 519, 522, 14788, 14841
 - blood serum and extracts, 14853
 - caffeine, 16792
 - camphor, 4171
 - carbon arc irradiation, 12643

Blood pressure (*continued*)

- as influenced by (*continued*)
 - carbon dioxide, 11179
 - carbon monoxide, cat., 14823
 - carnosine and homologues, 5764
 - 7770, 9506
 - carotid sinus denervation, 4062
 - chilling of body surfaces, 565
 - cholamine phosphoric acid esters, 7761
 - ciliary body extracts, dog, 12975
 - diethylstilboestrol, 11232
 - drugs, 13178
 - epinephrine, 4107, 7781, 11003
 - acetylcholine and, cat., 14849
 - barbital and, 16793
 - broom extract and, denervated
dog, 13160
 - sympathol and, 7775
 - ergometrine, cat., 16768
 - estrim, cat., 16627
 - exercise, dog, 7711
 - heat, rabbits, 13102
 - hemorrhage, enteral fluid absorp-
tion and, 12643
 - imidazoline derivatives, 9547
 - indole, 13178
 - infusion from *Omphalopus*, 13167
 - insulin-free pancreatic extract, 4145
 - insulin shock, 9526, 16726
 - intestinal distention, 13100
 - intramedullary injections, 13103
 - intravenous dextrose and sucrose,
. 11174
 - ischemic kidney extract, 9406
 - kidney cortex extract, 2300
 - kidney ischemia, 3952
 - labyrinthectomy, 494
 - leucotaxine, 624
 - methoxyphenylisopropylamines, 11226
 - muscular exercise, 14778
 - muscle tension, 12643
 - nicotine, dog, 13138
 - 933 F, hypertensive dog, 12643
 - 14822
 - number of renal glomeruli, 13014
 - paravertebral ganglia, dog, 14721
 - paredrinol, man, 13181
 - Passiflora* extract, 6545
 - perfusate, 2138, 2142
 - pervitin, 7767
 - α -phenyl- β -aminopropane, 16764
 - phenylethyldiamine derivatives, 13143
 - posture, 2276, 9510, 9511
 - potassium, 9077
 - procin, 16790
 - pulmonary emboli, 4061
 - renal and intestinal ischemia, 11166
 - renin, age and, 4069
 - r-N-methylepinephrine, 5755
 - serum substance, 4153
 - sodium, K and Ca lactate, 11192
 - spinal anesthesia, 9581
 - splanchnic nerve stim. and nicotine
after adrenalectomy, cat., 13000
 - sympathomimetic amines, cat, 11212
 - in phenol shock, 11259
 - thiobarbiturates, 525
 - transfusion and hemorrhage, 9529
 - tyramine, 9544
 - cocaine and, 11247
 - urine extracts, 38939
 - nicotine and, 3946
 - uterine distention, 13104
 - vasomotor activity, 9515
 - veritol, 556
- kidney pressor substance assayed by, 5486
- low, anesthesia and, 13178
- maintenance, renin and, 7733
- measurement, method, 11180
- probable error, 7728
- in old age, man, 16448
- pulmonary, differential, significance,
. 4071
- pulmonary aneurism in measurement,
. 14767
- pulse changes and, 9509, 9510
- reflex, vagus-post-pituitary, pathways,
. 7658
- relation to body constitution and race,
. 5943
- retinal, detn., 13131
- standard stimulus, breath-holding as,
. 11160
- systolic, continuous registration in
humans, 5498
- detn., rat, 9535
- recording, continuous, method, man,
. 9135

Blood pressure (*continued*)

- venous, detn., direct, 1945
- direct measurement, 4086
- during carotid sinus syncope, 498
- high, effect on cerebral blood flow,
. 2266
- mediastinal lesions as affecting, 4077
- vein ligation and, 13106
- voluntary hypercirculation and, 14770
- of whites in tropics, 16742
- Blood serum. (See also *Antiserum*; *Sero-
diagnosis*; *Serology*.)
- agglutination reactions, specificity vs.
non-specificity of 2nd stage, 9897
- anaphylaxis in monkey induced by
heterologous, 6062
- anesthetic for bleeding rabbits for,
. 2297
- antibodies neutralizing lymphocytic
choriomeningitis virus in
human, 15166
- anticomplement, thyroxine and di-
iodothyroxine as affecting, 8123
- anticomplementary action, of human,
therapeutic horse sera as af-
fecting, 4518
- in myeloma, 4249
- antitoxins, in noncaseating tubercu-
losis, 16897
- antigonadotrophic properties, signifi-
cance, 16932
- anti-platelet, in production of purpura,
. 7887
- of athletes, effect on adrenals of guinea
pigs, 3898
- bactericidal action as influenced by
therapeutic horse sera, human,
. 4518
- by vegetative poisons, 4561
- biochem. differences in primate spp.,
. 8027
- changes in aging, 13501
- cholesterol effects on streptolysins in,
bacterial contamination and,
. 17150
- as colostrum substitute, 2485
- complement in, detn., 9841
- injections as affecting, 917
- relations to proteins in various
spp., 2571
- complement titer, irritation of splanchnic
vs. vagus nerves as affecting,
. 4461
- conc. in cellophane bags, removal of
salts and, 12730
- concentrated, effect on plasma vol.
and serum protein conc., 3630
- conjugated, antisera to, specificity,
. 13447
- convalescent, in trichinosis therapy,
. 8713
- depressor and pressor action, 4158
- dialysis reaction, in reticulo-endothelial
system disease, 5840
- dropping vial for, 17830
- drying in frozen state in cellophane
bags, 12731
- effect on:
 - adrenals, 9314
 - blood pressure and vessels, 14853
 - hemolytic streptococci, 8115
 - of fish, hemolysins, 6082
 - flocculation after dilution, 10887
 - of fowl, effect on electrophoretic mo-
bility of human erythrocytes,
. 245
- group-specific agglutinins for human
cells in rabbit, 11568
- growth factor for diphtheria bacillus
in, 10088
- hemolytic power, ingesting vegetable
hemolysin as affecting, 2533
- hypersensitivity to horse, passive
transfer negative in guinea
pig, 13394
- immunological properties, sulphone
compounds as affecting, 8098
- local endoanaphylaxis induced by
autogenous hydrolyzed, 13435
- mare, antibodies and antigonadotrophic
activity after treatment with,
rabbit, 7551
- normal, effect on cancer cell lysis,
cholesterol esters and, 7825
- pancreatic lipase activation by, 1895
- permeability of hematoencephalic bar-
rier to horse, in poliomyelitis,
monkeys, 12649
- phagocytosis-promoting power, irrita-
tion of splanchnic vs. vagus
nerves as affecting, 4476
- polarographic study in cancer, 18234

Blood serum (*continued*)
in postencephalitis colloidal lability, 2418
precipitinogen, at onset of rheumatic fever, 2377
of pregnant mare, antibody production to, 17175
assay in rat and rabbit, 5626
effect on ovaries of adult monkey, 5626A
masculinization of ♀ rat by, 12934
period of admin. as affecting ovarian response, rat, 12949
properties, book, 9143
proteinases of *Clostridium* spp. inhibited by, 15162
removal of factor causing serum sickness, 17135
serological behavior of native vs. heated, 4506
serological comparison of duck and hen, 905
sheep-serum hemolysin and agglutinin titers in human, 13519
Shwartzman phenomenon by normal horse, 797
skin-sensitizing, fractionation, 6037
snake, hemolytic power, 4434
spreading factor from, 8105
surface tension during insulin shock, in schizophrenia, 7916
Takata reaction-value, 1969
uremic, ultra-filtrates, anemia due to, 11321
vits. as affecting, 2572, 2573
in vitro production of antihormone and antitumor substances, 3863
Blood transfusion. (See also *Transfusion*.)
bank for, methods, 7326
effect on:
blood flow, 9529
blood K, 16426
blood pressure, 9516
hearts of anemic children, 16823
leucopenic myelogenous leucemia, 643
optochin accumulation in tissue, 9893
plasma prothrombin, 16418
reticulo-endothelial system, 9832
from fasting and fed dogs, effect on metabolism, 9182
fate, of erythrocytes in, 10897
in intraperitoneal, 1959
filter for, 16392
prep. of universally compatible ascitic fluid for, 17327
preservation by bacteriostatic drugs, 11664
with preserved, factors affecting, 3626
reactions, prevention, 3607
subgroup relations, 17231
therapy in diabetic coma, 4267
typing for, 17235
Blood vessels. (See also *Blood pressure*; *Circulation*; *Circulatory system*; *Pulse*.)
in acrocyanosis, sleep and, 11263
amyloidosis and, path., 9612
anastomosis, arterio venous, diam. changes in relation to pressure changes, 15009
brain, affections, in children, 16821
diagnosis, therapy, 4059
in sickle cell anemia, 13250
development, opossum, 15071
in essential hypertension, 11171
of *Macaca*, 683
of *Testudo*, 16958
chorionic, erythroblasts in, human embryo, 2161
choroid plexus, fetal, onset of secretion in, 1964, 1990
interstitial granular cells, in psychotics, 5868
of corneas of mammals, 2438
coronary thrombosis, sex difference in, 475
development in *Anura*, 9686
distr. in ascidian, 16415
effect on bone changes in leprosy, 4232
elasticity in hypertension, 504
embedding in rubber paraffin, method, 7989
to fossa ovalis, 669
glomus tumors, review, 5811
growth of transplanted sarcoma and, mice, 594
of human enamel organ, 5906
of hypophysis in leopard frog, 9685
as influenced by pH, 13121
by leucotaxine, 624
of lung, drugs as affecting, 9574

Blood vessels (*continued*)
to mammalian kidney, 13295
mediastinal, lesions, effect on venous pressures, 407
of nasal septum in mammals, 5890
nerves, method of staining, 7990
new formation in abnormal tissues in lungs, 615
patent ductus arteriosus in sheep, 17054
peripheral, in disease, papaverine as affecting, 11186
thermal reflex vasodilatation test, 11197
reaction to myocardial ischemia, 11182
permeability, testicular extract as affecting, 10838
to pituitary dog and cat, 13295
reaction to arterial pressure, 13125
relation to absorption lines of cornea, children, 14868
to retina, 668, 14773
rôle in spread of tuberculosis, 13247
in scleroderma, 630
segmental, of American cockroach, form and function, 16965
thorax, visualization in pulmonary heart disease, 4775
to vasoconstrictor nerves, threshold values, 2231
to vasodilator nerves, threshold values for, 2232, 2233
arteries. (See also *Carotid sinus*.)
anomaly in kingfisher, 9775
aorta, arch, aneurism, absent pulse in upper extremities, 13127
calcification in infant, 495
changes, effect on venous pressures, 4077
in hypertension, 4099
chemoreceptors, location and function, 13105
coarctation, bicuspid valve and, 11178
effect on blood pressure in arms, 488
pressure pulses in, 12643
constriction, effect on blood pressure, 9517, 11203
elasticity, 12643
histo-physics, 4082
medial degeneration in dissecting aneurism, 14777
medionecrosis aortae idiopathica cystica, 16744
non-rheumatic calcific stenosis, 11175
obstruction, in etiology of hypertension, 5711
pressure, effect on coronaries, 7721
standing waves of pulse, study, 4070
stenosis of isthmus, heredity, 5721
syphilitic, incidence, 11208
tensility, age, temp., and chem. as affecting, 4076
thoracic, sacular aneurism, 9521
valves, congenital malformations, 9776
velocity of pulse wave, dog, 4060
wave velocities, in Valsalva expt., 13135
aortic ring, cartilagenous foci, rats, 9520
apparatus for recording diam. variations, 492
arterioles, acetylcholine as affecting, 11228
in acute nephritis, 481
autonomy, spinal anesthesia and, 9531
changes in hypertension, 5719
axillary arrangement in primates, 4376
carotid, occluded, collateral circulation development, 12643
thrombo-embolism, effect on brain, 14763
contraction aiding blood flow, 492
coronary, aneurysm, 2273
aortic valvular disease and, 5714
blood flow in, 5728
in cardiac metabolism, 9530
distr., 5888
epinephrine effect, in fibrillation, 16730
in higher primates, 8012
as influenced by:
acetylcholine, 9518
anaphylaxis and histamine, 7702
intramyocardial pressure, 4078
insufficiency, electrocardiogram and, 4083

Bone (*continued*)
radius, congenital dislocation a symptom of elbow malformations, 1794
ribs, anomalies, man, 5966
sacrum, neurogenic tumors, clin-path., 16828
scapula, coracoid process in primates, 17025
sternum, bone marrow in hyperthyroid and myxedematous states, 11386
distribution of active bone marrow in, 2431
puncture, technic and myelograms, book, 4244
vertebra, anomalous, man, 5964
atlas, vertebral artery and, 13292
growth in length, dog, 9497
inherited malformation, man, 1790
intervertebral disks, post. protrusions, path., 7679
variation in number, correlated with body length, pig, 7139
Bone marrow. (See also *Hematopoiesis*.)
activity, of reticulo-endothelial system in, 11385
in sensitized rabbits, 2427
in agranulocytosis, 14934
in aplastic anemia, path., 5835
cells, in gastric and duodenal ulcers, 16961
histogenesis and nomenclature, 7934
morphology, 4318
deposition of radioactive substances in mice, 4189
development of tooth germ elements in, 14999
drug injections, effect on blood pressure, 13103
extract, effect on brain, guinea pigs, 14982
femoral and tibial after ligation of iliac vein, rabbits, 4319
in hereditary hypochromic anemia, 13258
hyperplasia, in inflammation, 9607
as influenced by:
aminopyrine, 16759
gastric cancer, 11308
x-ray, 1908, 3576
inhibition induced by ligation of splenic vein, rabbit, 2426
lymphoid nodules in, 13296
metabolism in serum, rabbit, 12643
multiple myeloma, review, 5831
in mycosis fungoides, 11317
in polycythemia vera, 5830
puncture, in leucemia diagnosis, 11313
sensitivity reactions to drugs, 522
stain, azocarmine as, 7999
in sternum, distr., 2431
in hyperthyroid and myxedematous states, 11386
in worm infestations, 14933
n true erythremia, 7880
n uremic anemia, 11321
venous sinusoids as erythrocytopoietic centers, 15004
e-black, toxin (bacterial) adsorption by, 6092
ion, new tapeworm in, 15992
ks, microorganisms injuring, 1033
klice. (See *Corrodentia*.)
virus decoloratus, as vector of tick-bite fever, 8203
tia (p.1864²), from Hainan, 6391
ridae (Crustacea), p.1873⁴
ginaceae (Dicotyledones), p.1867¹
icic acid and saponin in, 1334
sus (p.1864⁴), in Western Africa, 6383
isia, new periodical, 10706
aux mixture. (See under *Sprays*.)
t's anti-immune effect, 917
t-Wassermann reaction. (See *Wassermann reaction*.)
ve's, infestation of trees, hurricane as affecting, 12205
icorn, in furniture wood, Dutch East Indies, 14130
living and dead teak trees, 14131
sia (p.1876²) orientalis, ♀ & genitalia, 14282
s disease. (See also *Encephalitis*.)
otic silver fox, paratyphoid bacilli causing, 4683
tious anemia compared, in horses, 4605
viability and factors affecting, 6173
co, deficiency, in apples, 3146
di, deficiency, 3169, 4983
fel, worn heart of rutabaga and turnip due to, 8617

Blood vessels (continued)

- veins (continued)
 iliac, ligation, effect on femoral and tibial marrow, 4319
 inferior vena cava, method for radiography, 487
 variations during respiratory cycle, 487
 injections into, apparatus for, 16397
 occlusion, reactive hyperemia and, 11205
 of penis, comp. anatomy in mammals, 4312
 retinal, Queckenstedt test as affecting, 5865
 splenic, conc. and sedimentation rate of blood in, 1988
 ligation, effect on bone marrow and blood picture, rabbit, 2426
 sup. vena cava bilateral occurrence, 11458
 sclerosis, in congestive heart failure, 14761
 sympathicomimetic drugs, as affecting, cat, 14805
 thrombosis and carcinoma, 16880
 valves regulating circulation in capillary net of renal-portal system, birds, 11381
 varicose, in pregnancy, 11108
 ulcers after phlebitis, 4084
 vaso-vasorum, lumbar sympathectomy, as affecting, 2269
 Blossoming. (See *Anthesis*; *Phenology*; *Photoperiodism*.)
 Blowfly(ies). (See also under genera, e.g., *Calliphora*; *Cochliomya*; *Lucilia*; *Phormia*.)
 in fleece, moisture as affecting, 2490
 trapping, Texas, 5061
 Blueberry(ies). (See also *Vaccinium*.)
 frozen-pack, microbial content and factors in, 136794
 lime as affecting, 138710
 powdery mildew, var. susceptibility, 121433
 propagation and culture, Mass., 176212
 rooting of cuttings, auxilin and hormone as affecting, 176814
 twig blight (*Phomopsis vaccinii*), 663184
 Blue jay, banding studies, 124440
 Blue marlin, growth, post-larval, 69039
Blumea balsamifera, infusion, pharm., 23093
 Boarminae (Lepidoptera), p. 1877
 Bobcat(s), food habits, 10821
 white-footed, notes, 701038
 Bobwhite. (See *Colinus virginianus*.)
Bocconia (p. 18653), n. sp., 285065
 Body. (See also various parts of body, e.g., *Hand*, *Limbs*, etc. *Anthropometry*; *Craniometry*; *Growth*; *Man*.)
 activity, cycles, vit. A deficiency as affecting, rat, 91638
 effect on pulsation rate, *Euzoa laevis*, 173632
 of fish in aggregations, 17434
 as influenced by:
 adrenal extract, emotion and other factors, sloth, 126935
 caffeine, mice, 9571
 food, mice, 125772
 frontal lobe lesions, 85490
 high sugar diet, 102983
 normal fluctuations of light intensity, *Bufo*, 13497
 testosterone, senile rats, 1126613
 lack, rôle in obesity, 14961
 of pure bred and hybrid dogs, 112643
 during sleep, children, 1116711
 build, of infants with eczema, 117004
 cavity. (See *Abdomen*; *Coelom*; *Theipraz*.)
 chloride, detn., 14516
 composition, high sugar ingestion, m as affecting, rat, 145193
 constitution, asthenic type, hered. lit., 19723
 familial tendency to rheumatic disease and, 5795
 gastric ulcers and, 2106
 heart size and, 5712, 11169
 of high altitude inhabitants, 16240
 longevity and, man, 433
 in major trigeminal neuralgia, 16941
 in obesity and menstrual disorders, 9630
 in relation to blood pressure and race, 5943
 rôle in arthritis, 16902
 in etiology of psychosis, 2458
 toxemia of pregnancy and, 5670
 types, nervous function, temperature, significance, 2413
 spleen size and, 15967

Body (continued)

- constitution (continued)
 vasomotor lability in schizophrenia and, 16943
 in workers, accidents and, 14991
 development, symmetry in people engaging in one sport or trade, 16708
 electrical polarity in, 12643
 fat, vit. B as affecting, rat, 3724
 fluids. (See also *Blood*; *Cerebrospinal fluid*; *Ascites fluid*; *Intraocular fluid* under *Eye*; *Lymph*; *Peritoneum fluid*; *Pleura fluid*; *Synovial fluid*; etc.)
 available, changes in dehydration, 12643
 bioassay, 213
 bone solubility in, 7688
 book, 10830
 in *Chelyosoma*, 16415
 chlorides in, detn., 16368
 chloride and bromide in, distr., 16381
 clotting, factors affecting, *Arbacia*, 247
 comp., *Tenebrio* larvae, 13025
 extra-cellular, in infants and children, 12643
 N detn., rôle of formalin in, 5484
 physico-chem. properties, *Antheraea*, 7354
 replacement of Cl with nitrates, 12643
 growth, during first year, 559
 of head in adults, 2457
 proportions in growing infant, 725
 heat loss, effect on growth and development, 3668
 exercise and chills as affecting, 280
 mechanism, 2015, 14523
 peripheral blood flow and, 281
 and production, mechanisms, separation in brain stem, 454
 at temps. from 23°C to 36°C, 14525
 rôle of extremities in, 12643
 heat production, environmental temp. and, rat, 16473
 of hibernating marmot, 3543
 as influenced by:
 fasting and refeeding, 16450
 metabolic stimulating substances, 12643
 quercitrin and dinitrophenol, rat, 7772
 height, of ♀ students, Tulane University, 17015
 helminth infestation as affecting, 6754
 children, 6754
 mean annual increments in children, 564
 height and weight, of pre-school children of Melbourne, 4374
 measurements, of Albanians, 5937
 in Bengalee school boys, 5922
 castration as affecting ♂ rats, 7547
 of Eurafrian and European juvenile adults, 17020
 of fowl, fattening gains and, 15119
 of German villagers near Stuttgart, 9730
 of high school and college students, 17033
 of Japanese athletes, 5928
 linear, analysis, 2453
 malnutrition and, S. African children, 9580
 in relation to blood sugar of normal Bengali, 17010
 to physical fitness, children, 11271
 in twins, 8013
 metabolite distr. in, 12643
 movement, analysis, man, 471
 differentiated finger, development in children, 3990
 measurement, apparatus for, 12737
 during sleep, psychopathic and feeble-minded patients, 9446
 righting. (See *Posture*.)
 size, and age changes, restricted diet as affecting, rat, 14554
 ant. pituitary extracts as affecting, rats, 9181
 blood Hb conc. and, 12643
 cycles of growth velocities, 2039
 hair growth and, rat, 7460
 phylogenetic increase in primates, 17016
 of tapeworms, numbers as affecting, 10485
 specific gravity, factors affecting, dog, 12643
 stature, changes in children, Batavia, 4177

Body (continued)

- stature (continued)
 of children of N. European and Italian ancestry, Mass., 8028
 surface area, cardiac output and, 2264
 formula for, chick, 16472
 man, 9213
 surfaces, chilling, relation to aural and sinus infections, 555
 temperature. (See also *Fever*; *Poikilothermes*; and under body parts, e.g., *Skin*.)
 activity and, sloth, 12935
 detn., mice and fish, 231
 effect on basal metabolism, rat, 3689
 on electric potential of body, mice, 203
 Hb variation and, cattle, 16423
 hyperthermia, emotional, in mammals and reptiles, 9142
 as influenced by:
 alcohol, 11258
 chilling, 585
 factors, sympathectomized dog, 7411
 insulin, factors affecting, 11241
 malaria, canary, 10493
 parathyroids, 3739
 thyroxin, guinea pig, 16626
 metabolic rate and, rabbit, 5532
 plasma vol. in ether anesthesia and, 252
 in pure bred dogs, 273
 of rabbit, 7410
 and different organs, 3664
 regulation, brain stem transection and, 454
 hypothalamic, cat, 2221
 as influenced by:
 humidity, clothed and nude, 3670
 skin and nose reflexes, 16317
 thyroid, guinea pig, 3864
 mechanism, 9491, 13073, 14523
 in newborn rabbits, 283
 review, 2015 7244, 9185
 in sloths, 5214
 variability, chicks, 2508
 types, in schizophrenic Sundanese, 720
 segregation, formulae for, 2454
 water, distr. in kidney diseases, 7341
 liver as affecting, 348
 as influenced by pituitrin, 14609
 plus Zn salts, frog, 16592
 loss. (See also *Sweating*.)
 in insulin shock, electrocardiography, 16722
 through skin, temp. as affecting, 4056
 weight. (See also *Obesity*.)
 at birth, variations, causes, 13190
 changes in children, Batavia, 4177
 curves, in tuberculous guinea pigs, 8227
 cycles, castration as affecting, mice, 9410
 in mice, 10995
 in early maturity, vs. obese children, 16819
 effect on carcinogenesis of methylcholanthrene, mice, 14906
 on Javanese coal miners, 14758
 equation for prediction, based on linear body dimensions, 721
 vs. gland and organ wt., African ungulates and elephant, 9210
 as influenced by:
 avitaminosis B, 14939
 bananas, children, 16824
 castration, 9367
 cortin, rat, 9321
 helminth infections, 1556
 high sugar ingestion, rat, 1560, 6754
 refeeding after underfeeding, rat, 3708
 theelin, rats, 597
 u. v. rays, rats, 12684
 vit. B, hyperthyroid rats, 3722
 liver wt. ratio in *Lacerta*, 9246
 loss, cardiac irregularity and, 4087
 low, hypophyseal hypofunction and, 14967
 lymphatic heart and, toad, 16728
 mean annual increments in children, 564
 of poultry, vs. shank length, 17102
 in rats during 14 yrs. in captivity, 3988
 relation to body measurements, cows, 6002
 to heart wt., birds and mammals, 670

Body (continued)
weight (continued)
relation (continued)
to organ wt., mice,.....717
to spleen wt.,.....5891
seriatim growth, postnatally,.....5796
wisdom, book,.....9072
Boeckella triarticulata, zoogeography,.....12320
Boehmeria nivea, culture, P. I.,.....17572
Boerhaave, biography,.....1687
Boerhaavia (p.1865²), embryo and seed, development,.....1171
Boerlagiodendron (p.1866³), n. sp.,.....13768
Bog(s). (See also *Fen*; *Marsh*; *Peat*; *Pollen analysis*; *Swamp*.)
communities of Scandinavia, analysis,.....5384
lake, plankton,.....1856
vertical distr. of temp.,.....3526
moors, of Germany, pollen spectra, 123
to west of Steigerwald, pollen analysis,.....12605
mud, of Lake Pomoria, biochem. processes in and therapeutic use,.....17428
peat, temp. study, Wisconsin,.....12571
peat flow, vegetation,.....1841
pollen analysis, Connecticut,.....16255
Germany,.....3516, 9026
Idaho,.....9016
Indiana,.....1839
in *Picea* belt,.....16258
Washington,.....7193
Wisconsin,.....12589
pollen deposits, New York,.....7205
pollen profile, Indiana,.....1844
profiles, interglacial in middle Europe,.....9018
raised, successive zones of deposits,.....16257
vegetation of Michigan, fire and erosion as affecting,.....119
Bohlinella (p.1883⁴), syn. of *Deperetia*,.....7038
Boigidae (Reptilia), p.1880⁴
Bolbitis (p.1863³), syn. of *Camptium*,.....8421
nakaii,.....1101
Boleosoma (p.1880⁴) *nigrum olmsiedi*, squamation,.....8817
Boletinus squarrosoides, in Virginia, 15446
Boletus (p.1862²) *flavidus*, descriptive notes,.....2801
Bollmannia (p.1880³), n. spp.,.....10623
Boll weevil. (See *Anthonomus grandis*.)
Bollworm, control,.....10413
Bombacaceae (Dicotyledones), p.1866²
Bombaz. (See also *Kapok*.)
malabaricum, regeneration from root suckers,.....10251
Bombina (p.1880²) *bombina*, vertebral column, development,.....5880
and *variegata* compared,.....12432
Bombus (p.1878⁴) **TANGUTICOMOMBUS**, n. subgen. of,.....18029
lapponicus, color variations,.....5138
mastuatus, aphid inquilines of,.....6927
separatus, syn.,.....12384
Bombycidae (Lepidoptera), p.1876⁴
Bombyliidae (Diptera), p.1877³
Bombyz (p.1876⁴), embryonal development, gene "burnt" as affecting, 17060
♂ genitalia,.....16042
mosaics, genetic constitution and bearing on embryology,.....7146
polyploidy,.....1723
relation of nucleolus to Z chromosome,.....1724
selection for more silk in cocoons,.....8676
mori. (See also *Silkworm*.)
cocoons of,.....3218, 8676
compound eye, differentiation,.....9796
congenital pebrine infection,.....3226
genetic and cytological proofs of attached chromosomes,.....7158
larva, hatching mechanism,.....8677
linkage of two white egg genes, 7157
pebrine transmission by spermatozoa,.....1561
races of, cocoon diameter and length in,.....8675
reproduction as affected by nutrition,.....3231
transplantation of optic disc and eye colors,.....7152
transplantation of ovary, effect on eye and egg color,.....7159
Bonasa (p.1881²) *umbellus*. (See also *Grouse, ruffed*.)
game take, analysis,.....14436
habits in Iowa,.....18078

population fluctuations, factors in,.....14435
winter food,.....3539
Bone(s). (See also *Calcification*; *Skeleton*; *Skull*; etc.)
of *Acanthocybium*, phylogenetic relations,.....6954
ash, vit. D as affecting, fowl,.....2081
of Australian aborigines, pathol. changes in,.....4375
clearing and staining,.....7990
composition, oxalates as affecting,.....16459
vit. D excess as affecting,.....309
crushed, dissolution by molasses fermentation,.....4689
development, in rachitic rats,.....16543
radium as affecting,.....5471
role of Mn in, chick,.....9165
development and path., review, 16600
drugs bound by,.....16296, 16297
electric saw for,.....12741
in F poisoning, x-rays showing, 5871
formation. (See also *Calcification*.)
bananas as affecting, children,.....16824
in carcinoma of prostate,.....14873
centers from birth to 5 yrs.,.....8017
fetal age and,.....8022
role of tension and pressure in,.....4387
variation and heredity, man, 16211
fracture, effect on blood phosphatase activity and ossification, 5707
on metabolism, rat,.....9159
healing, hist. in *Lucerta*,.....713
in roe,.....5913
metrazol causing,.....11250
vit. D₂ and parathyroid hormone in treatment, pigeon, 12863
grinding devices for preparing otoliths for exam.,.....6958
growth, in horses,.....11484
as influenced by:
adrenal glands,.....11063
gonadectomy and pituitary extract,.....9373
thymus extract,.....9333
as influenced by:
circulatory effects, in leprosy, 4232
fluoride poisoning, dog,.....14746
hyperthyroidism,.....395, 7535
phosphorus ingestion,.....467
potassium iodide feeding, guinea pig,.....9212
rheumiporostitis,.....16906
rickets-diet and Sr, rats,.....13272
thyroid feeding,.....9211
injury, relation to leucemia,.....11336
mechanical resistance and elasticity in relation to structure, 5916
metaphyseal bands, produced by P ingestion, comp.,.....467
in myeloclerosis and leuco-erythroblastic anemia,.....7888
phosphatase in, perotic chicks,.....3567
P metabolism in,.....14547
solubility in body fluids,.....7688
structure, infra red microphotographs,.....10877
in mechanical function lack,.....9492
taint, synovial fluid as medium for bacterial growth causing,.....10058
tissue, structural modifications in *Gallus*,.....5914
tumors, fibrosarcoma, methylcholanthrene induced,.....16840
metastases, from prostate, diagnosis,.....7855
sedimentation rate, myeloid immaturity and,.....7839
sex-difference in incidence, mice,.....601
auditory ossicles, development in opossum,.....5951
epiphysis, ant. pituitary extracts as affecting, guinea pig,.....5646
ethmoid, adenocarcinoma, sheep, 13217
hyoid, of S. African races,.....9752
hyomandibular, transition from fish to tetrapod,.....9679
of limbs, flattening, causation,.....722
relative growth in anthropoid apes, in chick,.....4380
long, regeneration of cartilage plates in,.....14998
wt. and comp., bilateral variation in,.....9708
mandibular, ameloblastoma, solid to cystic degeneration,.....14903
anthropometry,.....5926
maxilla, antrum in gorilla,.....728

Bone (continued)
radius, congenital dislocation a symptom of elbow malformations,.....1794
ribs, anomalies, man,.....5966
sacrum, neurogenic tumors, clin.-path.,.....16828
scapula, coracoid process in primates,.....17025
sternum, bone marrow in hyperthyroid and myxedematous states, 11386
distribution of active bone marrow in,.....2431
puncture, technic and myelograms, book,.....4244
vertebra, anomalous, man,.....5964
atlas, vertebral artery and,.....13292
growth in length, dog,.....9497
inherited malformation, man,.....1790
intervertebral disks, post. protrusions, path.,.....7679
variation in number, correlated with body length, pig,.....7139
Bone marrow. (See also *Hematopoiesis*.)
activity, of reticulo-endothelial system in,.....11385
in sensitized rabbits,.....2427
in agranulocytosis,.....14934
in aplastic anemia, path.,.....5835
cells, in gastric and duodenal ulcers,.....16961
histogenesis and nomenclature, 7934
morphology,.....4318
deposition of radioactive substances in mice,.....4189
development of tooth germ elements in,.....14999
drug injections, effect on blood pressure,.....13103
extract, effect on brain, guinea pigs,.....14982
femoral and tibial after ligation of iliac vein, rabbits,.....4319
in hereditary hypochromic anemia,.....13258
hyperplasia, in inflammation,.....9607
as influenced by:
aminopyrine,.....16759
gastric cancer,.....11308
x-ray,.....1908, 3576
inhibition induced by ligation of splenic vein, rabbit,.....2426
lymphoid nodules in,.....13296
metabolism in serum, rabbit,.....12643
multiple myeloma, review,.....5831
in mycosis fungoides,.....11317
in polycythemia vera,.....5830
puncture, in leucemia diagnosis,.....11313
sensitivity reactions to drugs,.....522
stain, azocarmine as,.....7999
in sternum, distr.,.....2431
in hyperthyroid and myxedematous states,.....11386
in worm infestations,.....14933
in true erythremia,.....7880
in uremic anemia,.....11321
venous sinusoids as erythrocytopoietic centers,.....15004
Bone-black, toxin (bacterial) adsorption by,.....6092
Boodon, new tapeworm in,.....15992
Books, microorganisms injuring,.....1033
Booklice. (See *Corrodentia*.)
Boophilus decoloratus, as vector of tick-bite fever,.....8203
Boottia (p.1864²), from Hainan,.....6391
Bopyridae (Crustacea), p.1873⁴
Boraginaceae (Dicotyledones), p.1867¹
silicic acid and saponin in,.....1334
Borassus (p.1864⁴), in Western Africa,.....6383
Borbásia, new periodical,.....10706
Bordeaux mixture. (See under *Sprays*.)
Bordet's anti-immune effect,.....917
Bordet-Wassermann reaction. (See *Wassermann reaction*.)
Borers, infestation of trees, hurricane as affecting,.....12205
longicorn, in furniture wood, Dutch East Indies,.....14130
in living and dead teak trees,.....14131
Bormansia (p.1876¹) *orientalis*, ♀ genitalia,.....14282
Borna's disease. (See also *Encephalitis*.)
enzootic silver fox, paratyphoid bacilli causing,.....4683
infectious anemia compared, in horses,.....4605
types,.....6173
virus, viability and factors affecting,.....4606
Boron, deficiency, in apples,.....3146
brown heart of rutabaga and turnip due to,.....8617

- Boron (continued)**
 in cotton, symptoms and chem. changes, 3185
 effect on mangels, 8455
 in pine, 14073
 in potato, 14076
 relation to drought spot in prune, 15835
 test for and relation to N metabolism, 12056
 in tomato, 14072
 effect on:
 Citrus trees, 1256
 soils and plants, pH as affecting, 15572
 sugar beets, 13841
 in phosphate rocks, amt. and detn., 4862
 rôle in soil fertility, 1354
 in white lilies, distr. in organs, 4955
Borophaga (p.1877^a) *incrassata*, parasite of bee brood, 15938
Borrelia, relapsing fever forms, inoculation sites for therapeutic use compared, 4630
 relapsing-fever, tick vector of California strain, 4669
 duttonii, (See *Spirochaeta d.*; *Relapsing fever*)
 gallinarum, (See *Spironema g.*)
 hyos, (See *Hog cholera*)
 muris, (See *Spirillum minus*)
 recurrentis, (See also *Spirochaeta r.*; *Treponema r.*; *Relapsing fever*)
 Chinese strains, transmission mechanism and routes, 4581
 demonstration by fluorescent dyes, 11575
 permeability of blood-spinal fluid barrier increased by infection, 8191
 vincentii, (See also *Vincent's angina*)
 in Vincent's angina with flagellated *Fusiformis dentium*, 15418
Bos (p.1883^a), (See also *Cattle*)
 grunniens mutus, autoecology, life hist., 5223
Boesmina, in S. hemisphere, 12820
Bostrichidae (Coleoptera), p.1876^a
Bostrichidae (Coleoptera), p.1876^a
Bostrychia spp., of economic value, Burma, 3048
 Botanical Gardens. (See also *Arboretum*)
 alpine, France, 8
 Buitenzorg, list of families and genera, 10694
 cacti, Cuba, 7
 Calcutta, history, 1675
 of Estonia, Tartu, 8415
 Botanical Society, California, history, 3420
 Botany. (See also *Biology*; special phases, e.g., *Phytopathology*, *Plant diseases*)
 of field crops, book, 8376
 glossary of terms dealing with succulents, 12
 phanerogamic, of Estonia, 3416
 pure and applied, physiology of plant cells and, 4960
 relation to agriculture, course emphasizing, 8880
 structure of economic plants, book, 1170
 systematic, "Ehrh. Plantag." defined, 10708
 importance of phylogenetic taxonomy in, 1672
 of New So. Wales, new periodical, 16149
 Russian literature on (1933-1935), 1691
 terms in, origin and pronunciation, 10692
 textbooks, 5270, 10637
Botaurus (p.1881^a) *lentiginosus*, *Giardia* in, 6773
 stellaris capensis, nest record, 5179
 Botelho's test, in equine infectious anemia, 8219
 Botflies. (See under genera, e.g., *Hypoderma*, *Oestrus*)
Bothrioccephalus. (See also *Diphyllbothrium*)
 carriers, blood picture, 14933
 latus, effect on anti-pernicious anemia factor, 2390
 rôle in pathogenesis of pernicious anemia, 2399
 serology of carriers, 2608, 2609
Bothriocera (p.1875^a), n. spp., 8755
Bothriodendraceae (Pteridophyta), p.1863^a
Bothriophyes (p.1873^a), n. spp. and key, 6830
Bothrops, antivenins, polyvalent vs. monovalent, 17143
 venoms of spp., neutralization by heterologous antivenenes, 4467
 atrox, venom, effect on blood coagulation, 5833
 regional variations in activity, 4160
 fasciatus, venom, isolation of active principles of, 6050
 jararaca, venom, clot-inducing and neurotoxic components, immunological relations, 864
Botrychium (p.1863^a), monograph, 2815
Botryococcus (p.1860^a), † planktonic spores of, 13719
 braunii, life history, 13719
Botryococcaceae (Algae), p.1860^a
Botrytis (p.1862^a), fruit rot of grapes due to, control, 1459
 anthophila, on red clover, 14045
 bassiana, as parasite of moth, 12174
 cinerea, causing blossom blight of *Vicia faba*, 6636
 polyblastis (*Sclerotinia*), 15447
 tulipae, X-ray treatment of bulbs as affecting, 1466
 Bottle(s), caps, for solutions, 228
 paper milk, treatment to prevent off flavor in milk, 17412
 Bottom fauna, of bass streams of Potomac watershed, 14421
 of Esrom Lake, 16274
 of fjords of East Greenland, ecology, 3491
 planting for trout streams, 14422
Botulin. (See also *Clostridium botulinum*)
 brain-adsorbed, cerebrospinal fluid as affecting, 2577
 Botulism. (See also *Clostridium botulinum*)
 animal rôle in spread, 975
 from commercial canned ripe olives, 17383
 from home-canned vegetables, 17383
 in livestock, cause and premonition in Australia, 6224
 toxoid vaccination, 6120
 microtoxin in, 11233
 in sheep, *pica*-associated, 15388
 in waterfowl, outbreaks, 17388
 Boulenger, G. A., biography, 26
 Bourneville's disease, syphilis in etio-pathogenesis, 2407
Bouteloua spp., composition and feed value, at various seasons of year, 1204
 eriopoda, density and yield, clipping as affecting, 12583
 gracilis, forage production, clipping as affecting, quadrat study, 12601
 Boutonneuse fever. (See *Pustular fever*)
 Bovidae (Mammalia), p.1883^a
 Bovine plague. (See *Rinderpest*)
Bovista (p.1862^a) *plumbea*, descriptive notes, 2812
Bovistella (p.1862^a), n. comb., 2801
 Boxelder bug. (See *Leptocoris trivittatus*)
 Boysenberry, origin, 2985
Bracharia (p.1864^a), n. spp., 15483
Brachionidae (Rotatoria), p.1871^a
Brachionus (p.1871^a) *pala*, mictic and amictic individuals, 14220
Brachiopoda (p.1871^a)
 of Greenland, (Fr.), 8235
Brachiura (Crustacea), p.1873^a
 BRACHYCANTHARUS (Col.) (p.1876^a)
 gibber, 6867
Brachycara (p.1876^a), n. sp., 6867
Brachycephalidae (Amphibia), p.1880^a
Brachycera (Diptera), p.1877^a
 † *Brachyoceratops* (p.1831^a), skeletal features, 18052
Brachycoelium (p.1869^a), hosts, 1593
 lymchi (*Leiodendrum*), 1598
Brachydactylus. (See under *Digitis*)
Brachydario (p.1879^a) *verio*, cleavage, karyokinesis during, 1327
 egg, differentiation without cleavage, 13326
 BRACHYDEGMA (Pisc.) (p.1879^a) *caelatum* (Fr.), 10621
Brachyenteron (p.1870^a), n. sp., 6803
Brachycephalus (p.1878^a) *lelonyi*, 5123
Brachygnathia (Crustacea), p.1874^a
Brachylaemidae (Platyhelminthes), p.1869^a
Brachylaemus (p.1869^a), technique for obtaining molluscan *Metacercaria*, 12299
 mcintoshii, from owl, 12293
Brachymetum (p.1863^a), n. sp. and notes on African spp., 11836
Brachymyria (p.1878^a) *euploae*, as parasite of *Oreba carnea*, 8977
 femorata, parasite of cabbage worm, 12066
Brachymyrmex heeri, in greenhouse, 6850
Brachyrhyncha (Crustacea), p.1874^a
Brachystomella (p.1874^a) *intermedia*, 14277
Brachytheciaceae (Bryophyta), p.1863^a
Brachytia (p.1876^a), n. sp., 10595
Brachyura (Crustacea), p.1874^a
 BRACHYURUS (Platyh.) (p.1870^a) *gobii*, from *Gobio*, 14211
 Brackish water(s). (See under *Water*)
Braconidae (Hymenoptera), p.1878^a
 in control of sugarcane white moth borer, 8667
 Bract. (See *Leaf*)
Bradypus. (See also *Sloth*)
griseus, body-temp. regulation in, 5214
 Brain. (See also *Meninges*; *Nervous system*)
 of aboriginal Australian, 17080
 activity, localization, 13068
 of *Amblystoma*, in early feeding stages, 679
 anatomy and evolution in vertebrates, book, 16968
 anemia, effect on behavior, dog, 11138
 lesions in, 12643
 apraxia vs. *agraphia*, semiology, 2115
 arcuate fascicle around caudal end of inferior olive, anatomy, 7957
 barbital in, in cumulative poisoning, 9576
 basal ganglia, relation to childhood behavior, 11272
 -blood barrier. (See *Hematocencephalic barrier*)
 bloodvessels, regeneration, opossum, 4323
 to visual pathways, 668
 cavities, casts, comp. anatomy in reptiles, 13287
 cells. (See under various parts of brain, e.g., *cerebellum*; *Nerve cells*; *Neuroglia*)
 centers, heat, factors affecting, 13073
 heat producing and heat regulating, 454
 myelencephalic sympathetic, fish, 14659
 respiratory. (See *Respiratory centers*)
 scratching, in medulla, 14724
 speech, 4032
 vasomotor. (See under *Vasomotor system*)
 cerebellum, astrocytomas, anatomy, 16841
 cortex, stimulation, responses after, cat, 2222
 disease, disorders of gait in, 4039
 lesion, motor seizures accompanying, cat, 16689
 ontogeny, review, 13297
 pathways, functional significance, frog, 14723
 structure, 13300
 cerebroside in, 5694
 cerebrum, ablation, diuresis after, effect on:
 blood CO₂, dog, 9272
 blood gases, normal and pregnant cats, 3651
 lizards, 7614
 respiration and respiratory muscles, cat, 16582
 of occipital lobe, pattern discrimination recovery after, monkey, 16671
 rigidity after, beaver, 5695
 of *Amblystoma* in midlarval stages, 7949
 circulation raised intravenous pressure as affecting, 2266
 corpus callosum, intercortical connections, 12843
 and related structures, anatomy in S. African negro, 2462
 structure in mammals, 4326
 transection, effect on locomotion, dog, 4020
 cortex, ablation, conditioned reflexes after, dog, 2195
 effect on:
 behavior, guinea pig, 16675
 field orientation, rat, 3986
 rat handedness in latch box, 3994
 reproductive behavior and maze learning, rat, 2190
 sugar tolerance curve, cat, 13069
 of post-central area, effect on motor performance, monkey, 12643

SUBJECT INDEX

Brain

Brain (continued)
 cerebrum (continued)
 cortex (continued)
 acoustic area, oscillographic and cytoarchitectonic study,14711
 anatomy in *Echidna*,16973
 in ostrich and emu,11390
 blood supply,683
 cells, cytology in dementia praecox,4295
 nuclear vol., man, cebus, cat,677
 size in primates,11402
 efferent fibers, injury, rhythmical variation of respiration associated with,12643
 frequency spectra in 3 dimensions,12643
 functions, review,11141
 in hair seal,456
 pH, ether narcosis as affecting,12643
 pH of blood and,4013
 insulin as affecting,7664
 localization of centers, rôle of cardiazol and strychnine in, rabbits,5867
 motor, ablation, reorganization of motor function after, monkey,455
 stimulation, effects, beaver, 5695
 study, seal,456
 motor centers, distr. in partly decorticated rabbit,11142
 motor response on stim. of area 4-s, suppression,12643
 motor and visual, bioelectric phenomena and cellular structure,4029
 occipital, lesions, effect on behavior, monkey,7667
 response to sensory stim. under deep barbiturate anesthesia, cat,5692
 simultaneous primary facilitation and extinction in,9484
 stimulation, effect on knee-jerk,12643
 structure, man, anthropoids, 4334
 surface, studies,4022
 vasodilator innervation,4063
 visual, functioning after partial destruction of area striata, rats,4329
 isolated, structural changes in,16971
 pathways, concerned in gonadal stim., ferrets,13071
 frontal lobe lesion, increased spontaneous activity produced by,9490
 lactic acid oxidation, in avitaminosis B, rat and fowl,5849
 lesion, effect on learning, retention and transfer, rat,16669
 leukocytosis in spinal fluid,11331
 vascular, in children, clin-path.,16821
 pathol. changes in aphasia,2408
 vascular disease, in sickle cell anemia,13250
 changes, in abortive tuberous sclerosis,16953
 in anesthesia, hist.,16947
 after anoxemia,13801
 in hemiballismus, path.,16945
 in metrazol convulsions,16949
 in Pick's disease in early adulthood,16942
 in postmeasles, encephalomyelitis,16944
 in schizophrenia with sudden death,16943
 in thujone and camphor convulsions, expl.,16946
 concentrate, effect on expl. tumors,14374
 corpus striatum, physiology,12643
 as subcortical center of cerebral motor system, comparison with red nucleus,11401
 creatine in, factors affecting,2021
 diencephalon, anatomy in Argentine fish,7946, 7947
 nuclear pattern, opossum,16969
 edema, intracranial pressure in, 16407
 electrical phenomena, review,7244
 estrus response localization, guinea pig,2223
 extrapyramidal motor system, physiology,4018
 fiber degeneration after localized subcortical electrocoagulation,11403

Brain (continued)
 fore-, bilateral extirpation, effects, rabbit,14731
 function in teleosts,16698
 geniculate body, medial, cortical projection,7960
 lesions, effect on hearing, cat,4007
 geniculate nucleus, lateral, electrical activity, cat,12643
 globus pallidus, histopath. in Hallervorden Spatz' disease,5893
 glycolysis in,5660
 factors affecting, rat,14719
 glycolytic and glycogenolytic enzymes in psychotic and normal humans,3559
 growth vs. potentials,465
 heat formation in, drugs as affecting,7760, 11221
 heat loss and heat production mechanisms in, separation,454
 hemiplegia, and coronary thrombosis,13108
 hemorrhage, in essential hypertension, encephalopathy and,11171
 hist., on injection of Hodgkin's glands,13237
 in repair of pneumococcal meningitis, rats,13238
 pH, anoxia as affecting,12643
 hypothalamus. (See also *Infundibulum* and *Subthalamus* under *Brain*; *Pituitary body*.)
 ant., stim., bladder responses after,5663
 body temp. regulation by, cat, 2221
 effect of frequency of stim. on response,12643
 functions, as influenced by metrazol, a motion picture,2237
 by picrotoxin, motion picture,2238
 hypophyseal adiposity, analysis of lipids in, rat,12643
 lesions, diabetes insipidus and, dog,7895
 nuclear pattern, comp. anatomy, 7958
 nuclei, relation to anhydremic responses to cold, monkey, 12643
 in obesity, rat,14963
 pressor mechanisms in,7653
 rôle in activity of antidiuretic principle from pituitary,16614
 sleep center, activity during sleep,2243
 stim., effect on gastric motility, 2099
 vasopressin released by, cat, 16599
 structure and function, review,11396
 strychnine as affecting,2324
 sweat center in,2226
 sympathetic efferent pathways from, decussations,7655
 inferior olive, medial tegmental tract and,7953
 as influenced by:
 bone marrow extract, guinea pigs,14982
 oxygen lack,463
 sclerotic vessels,16952
 therapeutic fever,12688
 thorotrast, ventricular retention,16891
 x-radiation, monkey,12694
 infundibulum. (See also *Pituitary body*; and *Hypothalamus* under *Brain*.)
 and epithelial hypophysis, developmental relationship in *Triturus*,15076
 lesions, pars intermedia activity and, tadpole,448
 section, degeneration of supraoptic nuclei after,16975
 intracranial pressure, increased test,5365
 invasion by pineal tumor, hypogonadism and,7827
 irradiation, electroencephalographic studies,12643
 lactic acid in anesthetics and convulsants as affecting,5783
 lesions, effect on sex cycle, guinea pig,13034
 localization, effect on stomach motility and mucosa,9487
 in lymphocytic choriomeningitis, 9666
 production by devascularization of areas,683
 of red nucleus and pyramid, effects in cat,11391
 or stimuli, stereotax instrument for placing in,12643
 subcortical, learning and,2173
2175, 2176

Brain (continued)
 lesions (continued)
 vascular, diagnosis, therapy,4059
 in yellow fever,9610
 lipid and glycerides, passage of fatty acids of food into,7505
 medulla, decussating pathways, functional significance, frog,14723
 reflex excitability, constant current as affecting, frog,14728
 reflex sympathoinhibitory center in,7671
 respiratory center localization, cat,12925, 12926
 respiratory effects of localized faradic stim.,12643
 metabolism, depression, effects,2028
 effect on schizophrenia,355
 as influenced by:
 barbiturates, rat,13189
 media,16468
 spermine,14807
 phospholipid, rat,8695
 respiratory, infant,7409
 review,14440
 in uremia,408
 mid-, basal ganglia affected in sympathico-endocrine insufficiency,2404
 section, effects, rabbit,14736
 necrotic foci in nervous system disease, monkey,654
 neocortex, ablation, effect on reproduction and behavior, rat,14679
 neuroglia. (See *Neuroglia*.)
 nuclei, basal, and hypothalamus, lesions in traumatic Parkinsonism, 7906
 center median, efferent connections,16970
 of diencephalon, opossum,16969
 hypoglossi, praepositus, intercalatus, and triangularis, anatomical relations,7959
 of hypothalamus and subthalamus, *Sus*,7958
 olfactorius anterior, of reptiles, birds and mammals,15011
 of pretecal region in turtle,15012
 red, effect of lesion in cat,11391
 as subcortical center of cerebral motor system, comparison with corpus striatum, 11401
 supraoptic, degeneration after section of infundibular stalk,16975
 paraventricular of hypothalamus, capillary bed, significance,15007
 of thalamus, structure, chimpanzee,685
 of trigeminal nerve in primates,15018
 occurrence of rat polyarthritis agent in,16893
 olfactory and accessory olfactory formations in mammals, birds and reptiles,15011
 olfactory bulbs, comparative study in vertebrates,9676
 olfactory system in,12643
 optic chiasma, sagittal tearing,9480
 parieto-occipital fissure, anatomy, 5892
 permeability of myelencephalic roof, extract of choroid plexus as affecting,16294
 phosphatase, factors affecting,9098
 pons, glioma, clin-path.,16829
 hemorrhage, clin-path.,16940
 section, apnea after,12928
 atonia after,12643
 potentials, of cerebellum, localization,12643
 of cerebral cortex, a rhythm, as function of age,16686
 in thyroid disorders,16934
 during anesthesia,12643, 14709
 during hypoglycemia,7663
 as influenced by:
 dinitrophenol,5693
 hypoglycemia and pentobarbital,13076
 poisons,7656
 chemical pacemakers for, in general paresis,12643
 during cyclopropane anesthesia,12643
 electroencephalographic studies, 7660
12643
 electrogram, Fourier transform,449
 in healthy relatives of epileptics,14729
 of hypothalamus,450
12643, 13076
 of identical twins,458

- Brain (continued)
potentials (continued)
electrogram (continued)
as influenced by:
acoustic stimuli during awaken-
ing,16691
auditory stimuli during sleep,
.....12643, 16690
"mental set,"7661
metrazol,4033
strychnine and light,2230
and lateral dominance in identical
twins,458
of Pb poisoned cat,12643
relation to muscle potentials in
paralysis agitans,2417
review,16688
of geniculate body,5691, 12643
growth rate and,465
as influenced by:
anoxia,463
cyanide, man,461
drugs, frog,12643
vit. B₁ deficiency, pigeon,11144
in insulin hypoglycemia,7910, 7911
latent time of blocking, auditory
stim. as affecting,7653
in localization of cerebral cortical
atrophy,7915
during mental blocking,2236
in myxedema,11355
in response to stimulation of various
afferent connections,16692
rhythm, control, frog,5696
during sleep, dominant and non-
dominant a groups,2227
factors affecting,2220
in various path. states,11356
pretectal cell masses, structure and
development, chick,16974
psychological functions, localization,
book,4012
pyramid, effect of lesion in cat,11391
pyruvate oxidation in,282
rectal muscle control by,14726
role, in control of fat metabolism, 3692
in vision,5688
stem, in control of vascular phenomena,
heat and,18102
hemorrhage, intracranial tumors and,
.....7829
lesions, tonic neck and labyrinth
reflexes in,4298
section, effect on lactate effect on
blood pressure,11192
stimulation, localised, electrocoagula-
tion and action potential re-
cording, electrodes for,3610
structure in case of cyclops,2433
subarachnoid space, saline absorption
from, CO₂ tension as affecting,
.....10883
subthalamus, nuclear pattern, comp.
anatomy,7958
sugars in protogen fraction,9164
temperatures in hypothalamus and
cortex during sleep,2243
of *Testudo geometrica*, blood vascular
system,16958
thalamus. (See also *hypothalamus* and
subthalamus under *Brain*.)
connections with cerebral cortex, 686
lesions, in major trigeminal neuralgia,
.....16941
and mid brain, anatomy in *Ambly-
stoma*,4327
optic, function, cat,16700
structure, chimpanzee,685
termination of brachium conjunc-
tivum fibers in, *Macaca*,678
tissue. (See also *Nervous tissue*.)
metabolism, anesthetics and ana-
leptics as affecting,4138
tracts. (See under *Nervous system*,
central.)
tuberous sclerosis and spongioblastoma,
cardiac rhabdomyoma and, con-
genital,7840
tumor, alexia and agraphia and,7841
angiomatosis, case,616
pathogenesis,2370
as cause of pituitary dwarfism, 9635
embryonic sympathoma, metastasis
from adrenal gland, hist.,5805
encephalogram,11356
intracranial pressure in,16407
metastatic, from breast,7858
with mimic paralysis of facial nerve,
.....16372
Shope rabbit papilloma virus and,
.....9600
transplanted, changes in heart and
liver,16883
trauma and,7828
- Brain (continued)
trypanosomiasis lesions in,1542
urea in, blood urea as index,3647
vascular disturbances, thrombo-embol-
ism of carotid artery and, 14763
vascularity, in frog,660
in tailed amphibians,11387
ventricle, lateral, choroid plexus, inter-
stitial granular cells, in psy-
chotics,5868
third, colloid tumor, path.,16873
water inhibition in vitro, salts as af-
fecting, rat,181
Brama (p.1879⁴) *raii*, from Kodiak I.,
.....3392
from Vancouver Island,3377
Bramatherium (p.1883⁴), new skull from
Siwalik, and synonymy,10665
Bramidae (Pisces), p.1879⁴
Branchia. (See *Gill(s)*.)
Branching, light as affecting, *Crotalaria*,
.....15742
Branchioma (p.1871⁹), syn.,17962
Branchiopoda (Crustacea), p.1873¹
Branchiosauridae (Amphibia), p.1880¹
Branchiosaurus (p.1880¹) † *darrahi*, (Cb),
.....18051
Branchiostoma (p.1878⁷), embryology,
guide,9765
indicum, Golgi apparatus, in endostyle,
.....14354
Branchiostomidae (Leptocardii), p.1878¹
Branta (p.1881²), food habits,9064
canadensis, migration data,16088
Brassica. (See also *Mustard*.)
spp., need for labeling seed properly,
.....1260
nigra, viability of seed, high temp. as
affecting,1324
oleracea. (See also *Cabbage*; *Cauliflower*;
Broccoli; *Kale*.)
self-sterility in,10733
sinapastrum, *Septoria* on,8407
Brassicaceae (Dicotyledones), p.1865³
Bread. (See also *Flour*; *Wheat*.)
Ca in white,16461
dough, chemistry of fermentation,
book,15394
making, problems, book,15393, 15394
milk, factors affecting, chemistry, 8337
nutritive value,12775
phytins in,3661
"potato disease," colloidal changes in
and etiology,4693
rye, flavor, acidity and chem. comp.,
bacteria in leaven as affecting,
.....10061
staling, review,1024
wheat and rye sprouts in, dietary
value,16451
-yeast, *Mycotorula* and *Blastodendron*
from homemade,4646
salt solns. as affecting,15396
Breast. (See *Mammary gland*.)
Breathing. (See *Respiration*.)
Breeding. (See *Plant breeding*; *Animal
husbandry*; *Genetics*; *Heterosis*; *Hy-
brids*; *Inbreeding*; *mating behavior*.)
Bremia (p.1861³) *lactucae*, on lettuce, effect
of light on sporulation,4995
pathogenicity as affected by light,
.....17822
lampsanae, on *Lampsana*,8408
Brevicoryne brassicae, control of on cabbage,
.....17879
as vector of turnip mosaic,8616
Brewers, relations with scientific stations,
.....17399
Brewing, bios in relation to,6258
infection sources and biological control,
.....17403
new periodical,16148
yeast control in,17402
Brierley, W. B., portrait,7075
Bright's disease. (See *Nephritis*;
Nephrosis.)
Brilliant green, sulfate, in tapeworm
therapy in poultry,17279
in therapy of spirochaete infections,
interference phenomena,824
Brisingsidae (Echinodermata), p.1871⁴
Britton, Wilton Everett, biography,8895
Broad bean(s). (See also *Vicia faba*.)
blossom blight (*Botrytis cinerea*),6636
Broccoli. (See also *Brassicaceae*.)
fertilizers for and nutrients removed
from soil by,17699
storage,10231
Brockmann's bodies. (See *Pancreas*.)
Brodiaea (1865⁴), tax.,4769, 6384, 6386
Bromeleaceae (Monocotyledones), p.1864⁴
Bromides, in blood vs. spinal fluid, 18178
detn.,9117
- distr. in body, chlorides and,7809
in central nervous system and spinal
fluid,7391
in tissues and body fluids,16381
effect on blood picture and physico-
chem. constants, dog,10929
on convulsant action of thujone,
rat,7801
radioactive, absorption rate,3546
skin excretion,3942
test for blood-C.N.S. barrier permea-
bility in poliomyelitis,9081
Bromine, germicidal action,4668
p-Bromophenol, intermediate in synthesis
of p-phenylmercapturic acid from
bromobenzene, rat,7427
Bromus (p.1864³), tax.,67, 1158
inermis, alfalfa as affecting,11943
Bronchiectasis, allergy rôle in,15165
in lung aplasia, path.,9608
pulmonary vol. in, after lobectomy,
.....5606
Bronchitis, in anthracite miners, inci-
dence,7921
pulmonary sclerosis and,7713
purulent, *Hemophilus influenzae* causing,
.....4619
Pasteurella in,4618
secondary, in Hodgkin's disease,622
tracheo, tuberculous, case studies and
therapy,13604
postmortem incidence,13642
review,13245
Bronchomonilliasis, expl. production in
rabbits,14917
Bronchopneumonia. (See also *Pneumonia*.)
bacterial associations in infants, Egypt,
.....8220
CO₂ eliminating ability in, dog,10893
chemotherapy,13544
Klebsiella pneumoniae from,6178
mortality in relation to climatic and
socio-economic factors,6209
procine contagious, histopath. and virus
origin,11625
psittacosis-like, virus-induced, in man
and stormy petrels,4589, 4600
streptococci vaccines prepared from,
.....4503
vit.-C therapy,15214
Bronchoscopy, tuberculous tracheobron-
chitis diagnosed by,13604
Bronchostenosis, as melioidosis aftermath,
.....11631
Bronchus(i), anatomy,7985
cancer, metastasis to heart,13230
with skin cancer in tar worker,
.....16870
as influenced by:
Amanita muscaria extract,5734
choline derivatives,5735
pervitin,7767
strontium,14791
sympathol,5731
major, tuberculosis, diagnosis,16892
mucosa, benzedrine as affecting,5789
opaque oil instillation into,12921
roentgen anatomy,13310
rôle in expectoration,16574
spasms, lobelia alkaloids as affecting,
.....4148
stenosis, in Boeck-Schaumann's disease,
.....11293
Brood, definition, in insects,1486
Brook(s). (See *Streams*.)
Broom, extract, effect on blood pressure,
denervated dog,13160
Broom corn, fumigation, vacuum, with
HCN,10467
Broussaia (p.1865⁴), review,15502
Brownea (p.1865⁴), n. spp.,2827A
Brownlowia (p.1866²), n. spp. and
n. comb.,15498
Browse, plants, of Adirondack Mts., 1300
of California foothills, seasonal
changes in comp.,13809
of Wyoming, P content,15096
in Wyoming grazing area, use in
detn. of forage-acre factor,4851
thinning of hardwoods for,14431
Brucella (p.1861¹), blood culture method,
.....17261
characteristics, monograph,17300
differentiation, by egg media,17445
of strains, potato infusion for,
.....8224
infection in cattle vs. man, in Orient,
.....988
nondialyzable products, specificity,
.....2547
protein antigen, prep. of purified,
.....4486
rats inoculated by,2713
sulfanilamide effects on,6148

Brucella (continued)

- abortus*. (See also *Abortion, contagious*; *Bang's disease*; *Brucellosis*; *Undulant fever*.)
- as affected by maggot washings (*Calliphora* and *Cynomya*) 12216
- agglutination, salt optima in, 4495
- agglutination titers in whey of raw milk, 11685
- agglutinin titer in blood vs. milk in relation to presence, 6124
- antigenic analysis, 15151
- antisera, antigen-antibody ratio in, salt conc. and, 4495
- guinea-pig protection methods compared with, 11533
- atypical strain, 11739
- behavior in and isolation from dairy products, 6285
- bovine infection, serodiagnosis methods compared, 2602
- complete antigen, reactivity, 13469
- serological relations, 2566
- effect on blood counts in cattle, 1009, 1015
- growth factors for, nicotinic acid and thiamin, 13705
- guinea pig inoculations, 2710
- human infections and their path., 13609
- immunization to, in calves and yearlings, 4538
- by formol-vaccine, 4539
- as influenced by vaccines of graded virulence, 15172
- incidence in bovine saliva vs. salivary glands, 15363
- in raw milk, 11684, 11685
- induced resistance to, by simultaneous inj. of *Listeria monocytogenes*, 897
- lanolin-lycopodium vaccine, value, 13530
- localization in bovine uterus, 15362
- pasteurization killing, 6285
- relation to *Br. melitensis*, 4609
- residual agglutinin ability, 2566
- roebeuck infected by, 6245
- selective media for, 6277-6283
- serodiagnosis of infection, by fresh-milk agglutination test, 6230
- methods compared, 6126
- serum agglutinating, gram-negative bacillus from, 11802
- sulphanilamide therapy, 8189
- undulant fever in Greece not due to, 6213
- vaccination, results with B.A.I. strain 19, 15366
- wild rat as host, 6232
- bovis*, serodiagnosis, sources of error in slow agglutination test, 8168
- vaccine, lanolin-oil prep., 6110
- bronchiseptica*. (See also *Bacillus bronchiseptica*.)
- antigenic relation to *Hemophilus pertussis*, 4447
- pertussis*, 4447
- pertussis*-like infection by bacteria resembling, 11632
- toxin, relation to that of *Hemophilus pertussis*, 4447
- melitensis*. (See also *Bacillus m.*; *Undulant fever*.)
- antigen, hist. of cutaneous reaction to, 9846
- antigenic analysis, 15151
- antigens, serological properties, 15152
- chemical and physical properties of fractions, 15151, 15152
- complete antigen, reactivity, 13469
- serological relations, 2566
- infections, pathogenesis and epidemiology, 11699
- prontosil therapy, 6136
- as influenced by nicotinic acid, 13705
- by sulfapyridine, 15187
- lipid antigens of *Mycobacterium tuberculosis* and, 11524
- relation to *Br. abortus*, 4609
- residual agglutinin ability, 2566
- suis*, complete antigen, reactivity, 13469
- Brucellerin, in diagnosis of *Brucella* infections, 9996
- Brucellosis. (See also *Brucella abortus*; *Br. melitensis*.)
- agglutination tests for, technic and value, 10005
- allergy in, immunological reactions not correlated, 4486
- arthropod vector suggested, 4609
- blood picture, in, 13261
- chemotherapy, 15266, 17243
- chronic, diagnosis, difficulties, 15259
- incidence and epidemiology, 15327
- serodiagnostic tests compared, 11519
- sero- vs. chemotherapy, 11519
- cutaneous reaction diagnostically questionable, 4486
- diagnosis, standard laboratory procedures, significance, 9996
- effect on blood counts, 1015
- endocarditis associated, 15266
- incidence, U.S.A., 6208
- as influenced by cow reactor elimination campaign, 11685
- in man and animals, monograph, 17300
- survey of infections and prophylaxis methods, 4685
- milk-borne, elimination by pasteurization, 11684, 11885
- neurologic manifestations, 6194
- opsonophagocytic test in, stain technic for, 9984
- pathogenesis and path. compared, 4609
- path. of human, 13609
- rats resistant to, 2713
- rats in spread, 2713
- reactor incidence, in school children, 11516
- review, 4614
- serodiagnosis, 4614
- methods compared, 2602
- by percutaneous reaction, 6080
- sulfanilamide therapy, 6134, 6148, 8189
- urinary-tract infections complicating, and therapy, 15276
- in veterinarians, 8300
- Bruch's membrane. (See *Eye*.)
- Bruchocida orientalis*, parasite of cotton stem-weevil, 14266
- Brucine*, synergic with HCN, 5733
- Bruguiera gymnorhiza*. (See *Mangrove*.)
- bark yield, 17655
- Brunellia* (p.1865⁴), n. sp., 2865
- Brunelliaceae* (Dicotyledones), p.1865⁴
- Bruniaceae* (Dicotyledones), p.1865⁴
- Brunner's gland. (See under *Intestine*.)
- Brussels sprouts. (See *Brassica oleracea*.)
- Bryaceae* (Bryophyta), p.1863²
- Bryales* (Bryophyta), p.1863²
- Brycon* (p.1879²), new spp., 1637
- Bryconamericus* (p.1879²), new spp., 1637
- Bryonia* (p.1867²), root, effects of homeopathic doses, man, 11236
- dioica*, embryo development, 11930
- Bryophyllum calycinum*, acid metabolism in, 15770
- ascorbic acid in leaves, as influenced by temp., 1399
- Bryophyta* (p.1863). (See also *Mosses*.)
- dist. and succession on aged trees, 1836
- Bryopteris* (p.1863²) *chilensis*, syn. of *Camptodontium cryptodon*, 11844
- Bryopsidaceae* (Algae), p.1860²
- Bryopsis* (p.1860²), n. spp., 2793
- Bryotropha* (p.1877²), resurrected, 16040
- Bryozoa* (p.1871²), as fouling organisms, ecology, 10793
- of Greenland, (Pr.), 3235
- Bryum* (p.1863²), n. sp., 6369
- Bubalis* (p.1883⁴) *tora*, preorbital glands, anatomy, 13285
- Bubo*, climatic. (See *Lymphogranuloma inguinale*.)
- Bubo* (p.1881²) *bubo*, in Germany, 8853
- Bubonic plague. (See *Pasteurella pestis*.)
- Bucephalidae* (Platyhelminthes), p.1869³
- Bucephalopsis* (p.1869³) *scombropis*, 6303
- Buceragenia* (p.1867²), n. sp., 6437
- Buchloe dactyloides*, with perfect flowers, 1191
- Buchnera* (p.1867²), spp., in Papua, 11895
- Buckthorn. (See *Rhamnus*.)
- Buckwheat. (See also *Fagopyrum*.)
- organic acid metabolism in, 15768
- SO₂ injury, factors affecting resistance, 6616
- Bucky rays. (See *Grenz rays* under *X-rays*, soft.)
- Bud(s). (See also *Stem*; *Flower*; *Leaf*.)
- accessory, regeneration in mulberry, temp. and moisture as affecting, 6590
- differentiation, in fruit trees, S. Africa, 1254
- in mango, 17631
- in peaches, pruning and shading as affecting, 1255
- flower- and leaf, development, winter oil sprays as affecting, 3178
- formation on fruit trees, Australia, 1226
- fruit, temp. compared with outside air, apple and raspberry, 6512
- growth, indoleacetic acid as affecting, 6577
- inhibition of initiation by growth hormones, flax, 8061
- mutation. (See under *Mutation and Variation*.)
- sport, of cassava, comparative study of varieties, 17636
- x-rays as affecting, *Salpiglossis*, 15753
- Bud moth, eye-spotted. (See *Spilonota ocellana*.)
- Bud scales. (See also *Leaf*.)
- Budding. (See under *Propagation*.)
- Budorcas* (p.1883⁴) *taiwanensis*, dist., 5223
- Buella* (p.1862²), tax., 6364, 17508
- Buerger's disease. (See *Thrombo-angiitis obliterans*.)
- Buffalo, *Bartonella* and *Anaplasma* in, 14175
- Corynebacterium equi* attacking, 2712
- Deg-Nala disease, path., India, 17913
- Indian, as host to *Schistosoma spindale*, 1544
- intestinal helminth nodules, 10500
- Plasmodium* in, 14201
- preventive inoculations, statistics, 8166
- surra in, India, 17903
- Buffer(s). (See also *Hydrogen-ion concentration* and specific buffers, e.g., *Sodium bicarbonate*.)
- action of calcareous shell of *Venus mercenaria*, 10981
- catalytic, effect on reaction $\text{CO}_2 + \text{H}_2\text{O} \rightleftharpoons \text{H}_2\text{CO}_3$, 7380
- solution, for Giemsa stain for blood smears, 8702
- universal for pH range 2.0-12.0, 5437
- Buffon, biography and selections from, 14331
- Bujo (p.1880²). (See also *Toad*.)
- coccygeal lymph hearts, innervation, 15014
- muscle, number of fibers per sq. m. m., 666
- O₂ uptake during development, 8038
- rhythmic activity, 3497
- arenarum, chondriomes in striped muscles, 7987
- circulatory and humoral alterations after destruction of lymphatic hearts, 16406
- cyt. of liver after fasting, 2002
- ♀, sex cycle, 7973
- hematopoietic system, 7936
- kept in light and dark, pituitary gland, histology, 15022
- liver pigment, origin and localization, 14584, 14585
- muscles, distr. of K in, 7986
- oviduct, gonadotropic substances as affecting, 7963
- bufo, operculum, histolysis during forelimb perforation formation, factors in, 15077
- asiaticus, *Phyllodistomum* in, 1595
- cognatus, cleavage, mitotic phases during, 17037
- marinus, of unusual size, 3396A
- melanostictus, vertebral column development, 5880
- valliceps, chromatophores affected by cardiac drugs, 5761
- tolerance to cardiac glucosides, 514
- virginianus, territory and population density, 18056
- vulgaris, hypophysectomy as affecting, 13045
- light absorptive power of various parts of eye, 9463
- uriniferous tubules, reactions with vital stains, 3949
- venom, chemistry, 9573
- Bufo (Amphibia), p.1880²
- Bug, harlequin. (See *Murgantia histrionica*.)
- plant, on cotton, 12190
- tarnished plant. (See *Lygus pratensis*.)
- Buglossidium* (p.1879²) *luteum*, sensory papillae, 3391
- Bulb(s). (See also *Flower*; *Ornamentals*; and under the bulb-forming plants, e.g., *Crocus*; *Onion*.)
- dormancy, O as affecting, lily, 17697
- farming, in relation to increase of locust, 9006
- Bulbocapnine, catatonia due to, 14803
- Bulbocoleon* (p.1860²) *piliferum*, copulation, 8373
- Bulinus*, notes, 5115
- contortus, as *Schistosoma* host, Sardinia, 3242
- BULLANYPHA (Prot.) (p.1868²) *silvestrii*, from termite, 12284
- Bulletin of Animal Behavior, 3434

- Bullhead(s). (See *Ameiurus*.)
Bumelia (p.1866⁴), n. sp., 2882
Bungarus fasciatus, venom, effect on blood sugar, 13174
Bunocotius (p.1880²) *apus*, type locality, 3385
Bunostomum (p.1870²), in *Hydroptes*, 1604
phlebotomum, in calves, control, 1582
 effect on blood picture of calf, 12745
trigonocephalon, in sheep, 5091
 Bunt. (See *Tilletia*; *Wheat*, bunt.)
Bupalus (p.1877²) *pinarius*, harmless insect resembling, 10430
 larvae, resemblance to *Hematurga atomaria*, 10430
 new poison for, 5049
 Buprestidae (Coleoptera), p.1876²
Buprestis (p.1876²) *conneza*, ♂ descr., 17993
 Burchell, aboriginal African and Dutch plant names, 8443
Burckella (p.1866⁴), n. sp., 6431
Burkinops capensis, new tapeworm from, 15987
BURKILLANTHUS (Dicot.) (p.1866⁴), 13761
 Burlap, hypersensitivity to, 6105
Burmeistera (p.1867²), n. sp., 6437
 Burns. (See also *Wounds*.)
 effect on heart, 5715
 extensive, treatment, 5763
 liver necrosis after yellow fever lesions and, 9250
 maggot- vs. chemo-therapy, 17256
 Burner, gas, for bacteriol. culture use, 4720
 Burning, in control of beetles, 17866
 effect on grassland succession, 9014
 on vegetation types, India, 10778
 of slash, effect on reproduction of Eucalypts, 9020
 on soil and vegetation, 9013, 9020
 as tool in land use and management, 12590
 Bursaridae (Protozoa), p.1868³
Bursaria (p.1866⁴) *subsessiliformis*, status of name, 11879
tomentosa, *Schiffnerula* on, 13738
 Bursaraceae (Dicotyledones), p.1866⁴
Butea frondosa, culture of lac on, India, 14102
Buteo (p.1881²), food habits, 9064
borealis, attacking bats, 14312
 Buthidae (Arachnida), p.1874²
Buthus quinquestratus, venom, preservation and antiserum production, 17201
 Butler, E. J., portrait, 7075
Butoides virescens anihonyi, 5207
 Butolan, in trichinosis therapy, 8713
 Butter. (See also *Butter fat*; *Cream*; *Dairy products*; *Milk*.)
 bacterial growth in, moisture dispersion as affecting, 2735
 bacteriol. exam., Burri method, 2736
 carotenes in, 5555
 and in carrots fed to cows, 5555
 creamery, phosphatase test of pasteurization efficiency of cream used for, 18684
 -cultures, bacteriology, 11782
 slow acid production, factors affecting, 11782
 diacetyl and acetylmethylcarbinol in, 8085
 from citric acid in, 8084
 formulas for calculating value, 18381
 fresh, aroma due to diacetyl, 8386
 fungi in, 6388, 10064
 pH values, factors in, 2735
 keeping quality as influenced by propionate treatment of parchment container, 17415
 reworking, effect on bacterial growth, 17414
Salmonella spp. growth in, at air temp., 1040
 salt in, indicators for estimation, 8086
 serum, detn. of dilution, 6006
 skunk-like odor, bacterial origin, 6274
 substitutes. (See also *Margarine*.)
 tainting by volatile products of oranges, 10042
 timothy bacillus in, pathogenic action (exp.), 13616
 viscosity, measurement, 4416
 Butter fat. (See also *Butter*; *Cream*; *Fat*; *Milk*.)
 calculation of fat corrected milk, 2489
 dairy breed comparison, 15110
 iodine and thiocyanogen number, Danish, 11501
 loss in centrifuging, temp. effects, 18376
 membrane study of synthetic creams, 17091
 in milk, acidity and, 11499
 from fasted cows, 13362
 raw vs. pasteurized, Canada, 13380
 production, breeding for, in Holstein-Friesian cattle, 12549
 calculation from immature production records, 4413
 of cows on pasture plus meat meal, 17084
 protein and energy equivalent of milk from, 15108
 roughage fed and, 13361
 sampling milk for, 17088
 separation, in evaporated milk, 9817
 vit. A activity in, 8090
 and vit. D in, from alfalfa, prairie hay, and beet pulp, 17086
 yield and comp., as influenced by fasting, 306
 by oils in ration, 4409
 Butterfish. (See *Poronotus triacanthus*.)
 Butterflies. (See also *Lepidoptera*.)
 brain hormone, rôle in pupation processes, 2478, 3885
 heath, 10430
 note, 10618
 time of emergence, 12396
 Buttermilk, curd tension, from synthetic creams, 17091
 dried, in chick rations, effects in coccidiosis, 9820
 powder, properties, 8076
 Butyl carbitol, toxicity, 9552
 β -hydroxy-. (See also *Acetone bodies*.)
 acetoacetic acid system, redox potential, 7285
 metabolism, rat, 304
 utilization, factors affecting, 12643
 Butyric acid, oxidation by kidney tissue, guinea pig, 9199
 Buxaceae (Dicotyledones), p.1866⁴
Buxbaumia (p.1863²), n. sp., 4748
 Buxbaumiaceae (Bryophyta), p.1863⁴
 Buxton, Dudley, biography, 16140
 Buzzard. (See also *Buteo*, and other genera.)
 sense organs, 1674
 Bythoscopidae (p.1875²), revision, 18017
Bythotrephes (p.1873⁴), statistical study and n. sp., 10571
C
 Cabbage(s). (See also *Brassica oleracea*.)
 black ring disease (virus), general account, 4980
Brevicoryne brassicae on, control, 17879
 club root. (See *Plasmodiophora brassicae*.)
 extracts, effect on carbohydrate metabolism, 298
 fertilizers for, 2983
 hardness, water as affecting, 15773
 insect pests, control, 6700
 N nutrition, relation to response to indoleacetic acid, 4917
 seed germination, culture extracts of *Alternaria* as affecting, 12142
 worm population, Louisiana, 5045
 Cabbage aphid, control, 17879
 Cabbage butterfly. (See *Pieris rapae*.)
 Cabbage moth. (See *Plutella maculipennis*.)
 Cabbage root fly, life history and control, 5046
Cacalia (p.1867⁴), tax., 6415, 18751
 Cacao. (See also *Cocoa*; *Theobroma cacao*.)
 bean, germ oil, vit. A in, 7478
 culture, 2980
 culture and diseases, New Guinea, 18879
 feeding, effect on liver metabolism, 7397
 industry, in P. I., 11980
 insect pests, control by parasitic insects, P. R., 8669
 insecticidal film on, pyrethrum oil, 3192
 shells, as feed for dairy cattle, 6008
 shell meal, as feed for swine, goats and poultry, 9811
 thrips on, control by parasitic insects, 8669
 Cachexia, absence in pituitary fibrosis, vs. Simmond's disease, 5853
 pituitary, case, 16931
 protein metabolism in Simond's disease, 3380
 Cacodylate, Na, in undulant fever, 15205
 Cactaceae (Dicot.), p.1866⁴. (See also *Cactus*.)
Cactoblastis (p.1877²), n. spp., 8792
Cactobrosis, spp., types for new genera, 8792
Cactus(s), beetle spp. feeding on, monograph, 8792
 collections, Cuba, 7
 growing, on commercial scale, 10693
 Cadaver. (See also *Autopsy*; *Death*.)
 serologically demonstrable changes in, strychnine persistence in, 5787
 Caddis flies. (See *Trichoptera*.)
 Cadmium, absorption by wheat, effect on bunt, 5007
 Caeculiidae (Arachnida), p.1874²
Caeculus (p.1874²), n. spp., 10579
 Caecum. (See *Secum* under *Intestine*.)
CAENAGNESIA (Prochor.) (p.1876²), new subgenus, 6946
Caesalpinia (p.1865⁴), spp. nomenclature, 6398
 Caesalpinaceae (Dicotyledones), p.1865⁴
 Caesarian section. (See under *Obstetrics*.)
 Caesium. (See *Cesium*.)
 Caffeine. (See also *Coffee*.)
 clinical effects, review, 4156
 effect on:
 amphibian lymph hearts, 16735
 autonomic nervous system, 5754
 blood pressure, 4171, 16792
 brain metabolism, 4138
 bronchi, 2250
 color sensitivity, 9478
 distr. of myofibrillar substances, striated muscle, 5912
 lactic acid metabolism of heart and lung, 7798
 narcotic activity, 16765
 skin temp. and insensible perspiration, man, 11252
 spontaneous motility, mouse, 9571
 sugar tolerance, man, 9543
 work efficiency, cola and, 16777
 expectorant action, 5758
 pharm., review, 4110
 potassium chlorogenate, effect on spontaneous motility, mouse, 9571
 toxicity and diuretic action, 7763
 test for, in tea and coffee extracts, 12051
 Cage(s), for chick nutrition studies, 792
CAHELA (Lep.) (p.1877²), type *Olyca ponderosella*, 8792
 Caisson disease, O₂ therapy, 11872
 Cajanus, seed, composition, 2935
 cajan, culture, India, 8461
Cakile maritima, gas exchange in, 1842
Calamagrostis, *Dothichloe* n. sp. on, 18732
 Calamariaceae (Pteridophyta), p.1863²
 Calamariales (Pteridophyta), p.1863²
Calamites (p.1863²) \dagger *multifolia* (Cb), 4726
Calamus (p.1864⁴), n. spp., 11864
 of Indo-China, 11113
Calandra (p.1876²) *granaria*, life history, morph., control, 5047
 Calanoida (Crustacea), p.1873²
Calappa (p.1874²), n. spp. (E), 12335
 Calappidae (Crustacea), p.1874²
Calathospongia (p.1869²) *tidioutensis* (?), 6775
Calceolaria (p.1867²), n. sp., 2882
 Calciholes, culture, book, 6507
 ecology in Virginian swamp, 10777
 seed germination, light and temp. as affecting, 6586
 soil factors determining habitat, 129
 Calcification. (See also *Bone*; *Cartilage*.)
 of arteries, infant, 495
 of bone, hypercalcification with estrogens, pigeon, 3883
 of cartilage, man, 2252, 5706
 as influenced by citric acid salts, 10945
 by hypophysectomy, dog, 3810
 metastatic, in carcinoma of breast, 2354
 rhythm in enamel and dentine of teeth, 7982
 of tissues, restricted diet and, 14555
 of tuberculous cavities, hist.-path., 7865
 Calcifuge(s). (See *Silicicoles*.)
 Calciphiles. (See *Calcicoles*.)
 Calciphobes. (See *Silicicoles*.)
 Calcium. (See also *lime*.)
 absorption, by clay soils, CO₂ as affecting, 13861
 intestinal, 12912
 by plants, organic acids and, 8566
 antagonism to Mg in nervous system, 7749
 to strychnine in C. N. S., 4016
 in ash of *Cysticercus*, 17910
 assimilation, cattle, 7455
 availability from milk and inorganic source, 7453
 in vegetable foods, 2034
 balance, of adolescent Chinese boys on low cost diet, 2010
 as influenced by:
 Ca and P in diet, rat, 12643
 estradiol, fowl, 12966

Calcium (continued)
balance (continued)
as influenced by (continued)
liver extract and vit. D, in idiopathic steatorrhea, 3739
Mg and Ca intravenously, 10993
orange juice, rat, 16447
oxalates in diet, 16459
P deficient diet, rat, 16445
roughage, rat, 9162
spinach and P, 2038
ultraviolet, in osteomalacia, 10990
vit. C and cortin, 2035, 2078
vit. D excess, 309
on low protein diet, 5520
on medium protein diet, women, 5522
in osteomalacia, 14669
in pregnancy and lactation, mice, 2166
in pre-school children, 11268
relation to F, 5871
renal calculi and, 7452
renal disease and, 14667
in blood. (See Blood, calcium.)
cardiac supernormality due to, 11177
in cheese, British, 4419
in chickens, age and, 14543
conc. in heart in cardiac failure, 18117
in crop plants, Mg as affecting, 15528
deficiency, effect on fetal movements, 7603
on hematopoiesis, 2032
on vegetables in greenhouse soils, 2992
in dentine, 4350
deposition in tissues. (See Calcification.)
detn., 1982
in blood, 16373
in diet. (See under Diet.)
diffusion into peritoneum, 12643
parathormone as affecting, dog, 3798, 8799
effect on:
arterial tone, 13118
bioelectric potentials, *Nitella*, 3077
blood coagulation, 1975
Chlorella, 12060
chronic idiopathic parathyroid tetany, vs. vit. D, 9636
coagulant action of trypsin, 10902
14503
distr. of snails, England and Wales, 12261
heart, frog, 491
snail, 3548
lespedeza, var. differences, 13838
livers damaged by chlorinated hydrocarbons, 11358
Mn utilization, fowl, 14552
milk curdling enzyme, 16814
muscle excitability, *Mytilus*, 4053
and sensitivity to acetyl choline, 2131
muscle respiration, 16301
myotonia, goat, 2312
NPK nutrition, *Zea*, 10298
oil-water phase boundary potential, 16306
plasma loss in guanidine poisoning, 7785, 7786
potassium toxicity, 16307
respiration, etiolated seedlings, 15699
in egg yolk, relation to vit. D supply, 6017
in erythrocytes, 1991, 5512
excess, as factor in chlorosis, 8622
and fat, in exptl. arterial lesions, 16727
fixation in transfusion, 1976
in hackberry fruit, 8516
intravenous, effect on diffusion of Ca, Mg and P into peritoneum, 9075
on electrocardiogram, 4073
on O₂ consumption, 279
in leaves, relation to Mg and K contents, 8058
metabolism, in mollusks, 9080
review, 7245, 14440
in mollusc, 6823, 6824
in muscle, distr., 10876
demonstration, 7695
in nervous system, metrazol and camphor as affecting, rabbit, 18157
penetration into lens, parathyroid hormone as affecting, 9076
requirement, of older men, 7457
of pre-school girls, 7456

Calcium (continued)
requirement (continued)
and utilization in milk and Ca gluconate, man, 7459
rôle in clot formation, 247
in detn. of prothrombin, 1989
in dist. of Spongillidae, 3498
in soil fertility, 1354
in saliva, resting and activated, 5585
source, 3759
salts, anticonvulsant action, 13178
dissociation, law of mass action in, 5433
effect on blood pH, 13178
on urine and blood pH, 4119
sensitivity to, increased by digitalis, 5770
in *Sepia* shells, use in medicine, 1321
in skin of canning peas, changes during ripening, 10218
in soil. (See under Soil.)
sorghum roughage and, sheep, 11482
in soy bean sauce, 16460
therapy in morphine addiction, 13178
in urine. (See under Urine.)
utilization in greens, 10961
in vegetative nervous system at high altitude, 9157
in white bread, 16461
arsenate. (See under Arsenicals.)
benzoate, effect on soil microorganisms, 17433
chloride, activity in amino acid solns. detn., 14488
effect on:
blood coagulation, 3617
electrolyte changes of stimulated muscle, 473
frog heart, 16774
nerve excitability, 14713
cyanamide. (See under Cyanamides.)
fluoride. (See under Fluorides.)
gluconate, in CCl₄ poisoning, 511
digitalis affecting lethal dose, 5770
in trichinosis therapy, effect on blood chem., 6751
lactate, effect on carotene assimilation, 315
and parathormone, in trichinosis therapy, 8713
sulfate, use in improving alkali soils, 15603
Calculi. (See also Concretions.)
biliary, comp., 12905
pigment in, detn., 209
solubility in gall-stone solvents, 12643
solution, pH of bile and, 2105
renal, analysis, 7295
blood Ca, P and phosphatase in, 5504
Ca balance and, 14667
dietetic therapy in, 10992
estrogens as producing, mice, 7536
formation due to vit. A deficient diets, 5662
metabolism of Ca and oxalic acid in, 7452
after sulfapyridine admin., 7738
7764
sulfapyridine compounds in, 17251
in urethra of ♀, 7567
Caldariomyces fasciculatus, causing sooty mold of sugarcane, 1429
Calea (p.1867⁴), n. sp., 6437
Calendra minimus, on Bermuda grass, 6887
Calendulauda (p.1861⁴), n. subsp., 7023
Calenia (p.1862⁴), n. spp., 10117
Calf (ves). (See Cattle.)
Calidris minuta, incubation by male, 5177
Caligidae (Crustacea), p.1873³
Caligoida (Crustacea), p.1873³
Caligus (p.1873³) *lucustris*, ♂ described, 12332A
CALISOGA (Arach.) (p.1874⁴), 17984
Callochelys (p.1879²), tax., 5160
Calandra (p.1865⁴), n. spp., 2828A
Callicarpa (p.1867²) *subpucescens*, note, 13753
Calliceras (p.1878²), revision, 12890
Callichthyidae (Pisces), p.1879³
Calliephialtes (p.1878²) *dimorphus*, parasite of pink bollworm, Brazil, 12231
Callitome (p.1878²), morph., phyl., 1632
Callinectes (p.1874³) *sapidus*, in fresh water, 3381
growth study, 2043, 9206
nerve metabolism, 7662
Calliostoma (p.1872²), n. spp. (Pl), 16010
Calliphora (p.1878²). (See also *Bowfly*.)
n. sp., 6896
changes in structure of fat body cells during pupation, 7123
maggot washings, antigenic and bactericidal quality of, 12216

erythrocephala, P partition, 12781
prep. and action of pupation hormone, 12982
Calliphoridae (Dipt.), p.1878². (See also *Blowflies*.)
Callipteris (p.1864⁴) *karskiana* (Pr), 15432
Callistochiton (p.1872²) *augustensis*, 3295
Callistopteris (p.1864⁴), n. sp., 8421
Callithamnion (p.1860⁴), n. sp., 18726
Callitris (p.1864⁴), of Italy (N), 13721
articulata, distr., 7219
Callizylon (p.1864⁴), in Devonian, 13716
Callose, in latex tubes, *Hevea*, 6625
in flowering vegetative stems, 10172
Callospermophilus c. chrysodeirus, in captivity, 7038
Calluna (p.1866⁴), branch structure and ecology, 2909
Callus. (See also Bone; Propagation; Wound, healing.)
Callymenia (p.1860⁴), n. sp., 8384
Calocera (p.1862³), n. sp., on *Pinus*, 4734
Calochortus (p.1865²), chromosomes and classification, 8906
Calodera (p.1876²), n. sp., 6866
Caloglossa spp., of economic value, Burma, 3048
Calomel. (See Mercury chloride (HgCl₂)).
Calonectria (p.1861⁴), tax., 15453, 17500
Calophyllum, photosynthesis in, 17709
inophyllum, hastening germination of, 15671
Caloplaea (p.1862⁴), n. spp., 17503
Caloprymnus campestris, spermatorrhea in, 7578
Calorimeter. (See also Respirometer.)
air-, differential, 12736
Emerson bomb, S detn. in fodder and excreta in, 3588
Calorimetry. (See Calorimeter; Metabolism (respiratory and energy), detn.; Respirometers.)
Calosoma sycophanta, predator on *Lygaeonematus*, 5051
Calosphaeria (p.1861³), n. sp., 15453
Calosporella (p.1861³), n. sp., 15453
Calotermes. (See *Kalotermes*.)
Calothrix (p.1860⁴), n. spp., 8385, 15437
Calotropagenin, potency, 513
Calotropis procera, poisons in latex of, 15687
Calvatia (p.1862⁴) *saccata* var. *brevis*, descriptive notes, 2312
Calycanthine, chem., 12040
Calymmatheca (p.1864⁴) † *kidstoni* (Cb), 8368
Calymmodon (p.1863⁴), n. sp., 8421
Calymperaceae (Bryophyta), p.1863²
Calymperes (p.1863⁴), n. spp., 8417
Calyptomera (Crustacea), p.1873¹
Calyptospora (p.1862²) *goeppertiana*, life hist., hosts, 11816
Calyptorates (Diptera), p.1877⁴
Calyptroclyx (p.1864⁴), n. vars., 10121
Calyx. (See Flower.)
Camass root, as food plant, 8516
Camassia (p.1865⁴), n. sp., 1158
Cambarus (p.1874³), acetylcholine in nervous tissue and blood, 11084
chromaffin nerve cell, nature, 5970
clarkii, adductor muscle, metabolism, 2249
muscles, innervation, 8063, 8064
Cambium. (See also Meristem; Phloem; Stele; Vascular system; Xylem.)
activity of flowering and vegetative shoots compared, 10172
tissue culture, 1872
wound, formation in *Ricinus*, factors affecting, 13984
Camel, blood comp. and working ability, 9803
surra in, India, 17903
Camelidae (Mammalia), p.1883⁴
Camellia japonica, blossom blight, due to *Sclerotinia*, 17748
Exobasidium camelliae on, host-parasite relations, 15841
mutations for flower color, 5308
Camelus. (See also Camel.)
Camera. (See also Photography.)
under-water, 7063
Camerina (p.1868²) (†), tax., 14196
Camerinidae (Protozoa), p.1868²
†, Mexico, 14196
Camniphora caudata, propagation from cuttings, 10254
Camomile oil, anti-inflammatory component, 16781
Campana (p.1867²), n. sp., 6437
Campanile (p.1872²) *greenellum* (E), 10558
Campanula (p.1867²), new tax., 4797E
divaricata, note, 15495
Campanulaceae (Dicotyledones), p.1867²
Campanulales (Dicotyledones), p.1867²

- Campanulatae (Dicotyledones), p.1867³
Campephilus (p.1881⁴), food habits, 9064
Campepthera permista, new tapeworm in, 15992
permista, new sp. cestode in, 12300A
 Camphor, action, convulsant, 7801, 16946
 expectorant, 5758
 mechanism of pressor, 4171
 effect on:
 Ca and K in blood and nervous system, 13157
 heart, frog, 7774
 narcotic activity, 16765
 Camphor tree. (See *Cinnamomum camphora*)
Campium (p.1863⁴), name maintained, 8421
Camponotus (p.1878⁴) *quadricipes*, inhabiting stems of *Endospermum*, 8488
Camptodontium (p.1863⁴), spp. taxonomy, 11844
Campylopus (p.1863⁴), n. spp., 11841
Canachites (p.1881⁴), synonymy, 16105
 Canal(s), Vienna Danube, fauna, ecology, 12617
Canarium ovatum, culture, in P. I., 11979
 Canary. (See also *Serinus canarius*)
 behavior of ♀, testosterone as affecting, 14697
 body temp., malaria as affecting, 10493
 in diagnosis of avian malaria, 6733
 malaria. (See *Malaria, avian*)
 -pox, mercurochrome therapy, 15374
 singing, testosterone as affecting, 12968
Canavalia, seed, composition, 2935
Canavalin, in jack bean, mol. wt., 1344
Cancellaria (p.1872²), n. sp., 6828
Cancellariidae (Mollusca), p.1872²
 Cancer. (See *Tumor*)
Cancer (p.1874³) *anthonyi*, double motor innervation in, 5702
 muscles, innervation, 8063, 8064
javanicus (E), 12335
pagurus, hemolymph, combined sugars in, 12747
productus, gregarines in intestine of, 10518
Canceridae (Crustacea), p.1874³
Candelariella (p.1862³), new species, 6364
Candida (p.1863³), morph., physiol., and tax., 4641
krusei, from surfers foot, 13623
Candlenut. (See *Aleurites*)
Candona (p.1873⁴), n. spp., 6846, 8755
 Candy, acidified, effect on tooth enamel, 5909
Canidae (Mammalia), p.1883¹
 chromosome counts in, 1715
 intranuclear crystals in hepatic cells, 3453
Canis (p.1883¹). (See also *Coyote*; *Dog*; *Wolf*)
latrans, liver cells, intranuclear crystals in, 4358
lupus lycaon, *Echinococcus* in, 15969
 Cankerworm, fall, control, 10425
Canna, linkage, 5317
edulis, carbohydrate content and cooking quality, vars. compared and factors influencing, 2930
Cannabis (p.1865⁷) *indica*, resin, chemistry and pharmacology, 6557
sativa. (See also *Hemp*)
 bioassay, 13178
 chemistry and physical properties, 10284
 phloem development and flowering, 10172
 psychic effects, man, 14792
 Canned foods. (See also *Botulism*)
 acid, spoilage by sporiferous anaerobes, 13677
 apparatus for opening, 2727
 chemical studies, 2723
 firmness measured by penetrometer, 6259
 history, 1023
 microbiology and technic, 6263
 textbook, 2722
 thermal processing of tinned, nomenclatures, 6267
 vegetables, botulism from, 17383
 Cannibalism, among insect larvae, 10766
 in bass, 9051
 in poultry, oat hulls, preventing, 790
 Canning. (See also *Cooking*; *Food, preservation*)
 of apples, use of peel in, 10063
 of asparagus, yellow deposit in, nature and significance, 17396
 of foods, bacteriol. studies of old cans, 2733
 chem. studies, 2723
 heating rate vs. can size, 2731
 history, 1023
 of fruits and vegetables, textbook, 2722
Canningius (p.1880⁴), from Greenland, 3235
 (D), 8813
Canobius (p.1879⁴), † taxonomy, 8813
 Cantaloupe. (See *Muskmelon*; *Cucumis melo*)
 Cantharidae (Coleoptera), p.1876¹
 Cantharides blister, microbiol. applications, 13625
 Cantharidin, effect on *Daphnia magna*, 4163
 synthesis and chem., 6547
 Cantharoidea (Coleoptera), p.1876¹
Canthigaster (p.1880⁴), n. sp., 8815
Canthigasteridae (Pisces), p.1880⁴
 Canthocamptidae (Crustacea), p.1873²
Canthon (p.1876²) *laevis*, internal anatomy, 3323
pilularius, infested with *Sarcophago*, 12360
Canthyrus (p.1876¹), n. sp., 10589
 Caoutchouc. (See *Latex*; *Rubber*)
Capella (p.1881³), habitats, courtship, 16073
 delicate, nesting data, 10644
Capibara, *Elmeria* in, 12276
Capillaria (p.1870⁴), in *Hydroptes*, 1604
columbae, exptl. infection, blood studies, chickens, 3249
 incidence in poultry, Scotland, 6749
 in pigeons, development, 14193
contorta, in turkeys, pathology and therapy, 17894
hepatica, ova, in human feces, 8691
 ova, in liver, wild rat, 1572
longicollis, incidence, Scotland, 6749
muris sylvatici, in pyloric adenoma, 12266
perforans, lesions, in domesticated birds, 12263
retusa, incidence in poultry, 6749
 Capillaries. (See under *Blood vessels*)
 Capitonidae (Aves), p.1881⁴
Capitularia (p.1864³), n. spp. and n. combs., 11873
 Capnodiaceae (Fungi), p.1861³
 distr., deciduous vegetation as affecting, 13733
 taxonomy, 13733
Capnorea (p.1867⁴), n. syn., 1158
 Capparidaceae (Dicotyledones), p.1865³
Capparis (p.1865³), n. sp., 6437
bussei, heterophylly, 10132
sola, alkaloids of, 4903
Capra (p.1883⁴). (See also *Goat*(s))
-Ovis hybrids, chromosome studies, 54
Capreolus (p.1883⁴) *capreolus*, distr. in Gt. Britain, 16114
melanotis, autecology, in Tibet, 5223
Capricornis (p.1883⁴) *sumatrensis milneedwardsi*, autecology, in Szechwan, 5223
 Caprifoliaceae (Dicotyledones), p.1867³
 Caprimulgidae (Aves), p.1881⁴
 Caprimulgiformes (Aves), p.1881⁴
Capromeryx (p.1883⁴), review, 8867
 Capsaicin, in *Capiscum*, Louisiana spp. compared, 1349
 effect on *Daphnia magna*, 4163
Capsala (p.1870⁵), n. spp., 10544
Capsaloides (p.1870⁵) *magnaspinosus*, from *Tetrapturus*, 10544
Capiscum (p.1867²). (See also *Pepper*(s))
 n. spp., 2882, 6437
 chlorophyll deficiency, 8928
 inheritance of immature fruit color, 12535
 Louisiana spp., 1349
 oleoresin, toxicity, 13178
annuum, inheritance of anther, petal and node color, 16167
 N in, 5521
frutescens, leaf curl, etiology, 14063
 14074, 14075
 Capsules, enteric coatings for, 349
Capsulocarpus (p.1867⁴) † *dakotensis* (K), 17476
 Carabao, breeding habits, 17076
 calves, control of helminths, 1562
 Carabidae (Coleoptera), p.1876¹
 Caraboidea (Coleoptera), p.1876¹
Carabus, life cycle statistics, 10593
Caralthuma (p.1867⁴), n. spp., 6418
diffusa, *Phytophthora parasitica* on, 3106
 Carangidae (Pisces), p.1880⁴
Caranz (p.1880⁴) *cryos*, notes on, 6964
mate, body form of, 6966
seafasciatus, taxonomy, 6963
Carassius (p.1879⁴) *auratus*. (See also *Goldfish*)
 cytology of pituitary in two vars., 12511
 pituitary gland, cytology, 13304
 population density, effect on O₂ consumption and activity, 434
 X-ray action on, 14467
 Carbamide. (See *Urea*)
 Carbanter, toxicity and excretion of Bi and I, rabbit, 16816
 Carbazole, derivatives, pharm., 7758, 7759
 in production of lung tumors, mice, 16831
 Carbazone, tolerance to, 14826
 Carbinols. (See *Acetylmethylcarbinol*; *Alcohols*)
 Carbitol, toxicity, 4131, 9552
 Carbobenzyloxy-proteins, immunol. and chem. properties, 17139
 Carbohydrate(s). (See also under specific carbohydrates, e.g., *Glucose*, *Glycogen*, *Starch*, *Sucrose*, *Sugar*)
 -acetone body utilization ratios with high acetone body conc., 12643
 in alpine plants, daily periodicity, 12084
 antibodies to, 922
 in apple wood and bark, factors affecting, 1267
 assimilation, blood chromic index as measure, 3625
 availability, fat as affecting, 2029
 bacterial, of diphtheria bacillus, effect on bacterial virulence, 8221
 effect on tumors, rats, 4196
 in cannas, vars. compared and factors affecting, 2930
 chem., book, 10984
 in *Citrus*, B as affecting, 1256
 complexes, analysis, 16374
 in conifer needles, effect on hardness, 3086, 14025
 in cotton plant, season and fertilizers as affecting, 1185, 13814
 dental caries and, 8307
 detn. of fractions in vegetables and fruits, 9126
 in diet. (See under *Diet*)
 dynamic effect and net energy value, 14524
 effect on:
 legume nodulation, 8343
 muscle electrical impedance, 12643
 perithecia formation, *Melanosporella*, 15761
 protein metabolism, 2020
 respiration and protein synthesis, oat roots, 10328
 of equine pseudoglobulin, non-specific nature, 2524
 fat formation from, by *Endomyces vernalis*, 8334
 fermentability, effect on reduction of met-Hb in erythrocytes, 7382
 formation, in plants. (See *Photosynthesis*)
 in legumes, Indian vars., 6454
 metabolism (animal). (See also under specific organs and tissues; e.g., *Heart*, *Liver*, *Muscle*, *Tumor*)
 in adrenalectomized depancreatized dogs, 12643
 in aglycemic heart-lung prep., 3686
 in amphibia, 16489
 in beriberi and epidemic dropsy, 11342
 in depancreatized dogs, 3683
 in diabetes, blood phosphates as affecting, 5852
 exercise and, 14534
 glycogenolysis, blood lactic acid and, 16487
 hypophyso-adrenal synergy and, 9194
 as influenced by:
 adrenal ablation, rat, 3866
 adrenal cortical extract and pituitary, rat, 12643, 12985
 adrenal cortical tumors, 587, 9657
 ant. pituitary extracts, 3797
 , 3856, 3874
 cabbage extracts, 298
 caffeine, heart-lung prep., 7798
 cortin and NaCl adrenalectomized dog, 3658
 cortin and pituitary extract, rat, 3901
 ether narcosis, 7432
 glycotropic hormone, 3933
 hypophysis, 12643, 16490
 insulin, 16486
 and ant. pituitary extracts, hypophysectomized rat, 3689
 in diabetes, 7896
 mammary gland extirpation, guinea pig, 3963
 mineral water, rabbits, 7433
 phloridzin, 16485

- Carbohydrate (continued)
metabolism (animal) (continued)
as influenced by (continued)
sulfanilamide, 5757
thyroid, hypophysectomized dog, 3890
trauma, man, 3920
vit. B, 5559
intermediary, methods and apparatus
for study, 7305
review, 5542
in organs of unanesthetized dog, 3684
in pancreas, 2027
Pasteur reaction, iodoacetic acid as
affecting, 12812
in phlorhizinized dog, 2128
review, 14440
rôle in protein metabolism, 7429
in undernutrition, man, 7431
metabolism (plant), of apples in
storage, 17716
bacterial, effect on oxidation-reduc-
tion potential, 2761
in bean, indole-acetic acid as affect-
ing, 4920
in leaves, K as affecting, 8585
in potato, ethylene as affecting, 17694
in wheat leaves during starvation, 14017
metabolites, intermediary, effect on liver
tissues, 5529
-nitrogen ratio, in apple shoots, root-
stock as affecting, 8502
nutritive value, 7403
in pecan shell and stuck, changes in
pre-feeding period, 11993
in pituitary hormones, 9342
in potatoes, minerals as affecting, 13910
production related to protein synthesis,
rôle of light in, 8591
-proteins, conjugated, chemo-immunol-
ogical, 833
in *Solanum villosum*, 1332
in soybeans, relation to drought resis-
tance, 14024
storage in alfalfa, clipping tops as
affecting, 17701
in apple rootstocks, structure vs.
vigor, 17623
tolerance. (See also *Glucose, tolerance*;
Sugar, tolerance.)
after protamine insulin, in diabetes, 545
in tomatoes, K as affecting, 4915
transformation, in grasses, 17595
in leaves, 17720
translocation, in celery, 1281
indoleacetic acid as affecting, beans, 4916
raspberry, 10319
vit. C formation from, 3592
in wheat leaves, detm., 17719
Carbolic acid. (See *Phenol*.)
Carbon. (See also *Charcoal*.)
active, effect on bacterial growth,
mechanism, 15415
assimilation, in plants. (See *Photo-
synthesis*.)
compounds, acyclic, and natural prod-
ucts, book, 14441
in culture media, effect on growth of
microorganisms, 11801
metabolism, in fungi, 15761, 17675
in potatoes, ethylene as affecting, 17694
in rhubarb leaves, 14020
N ratio, effect on flower formation,
wheat, 6604
particulate, in culture media, effect on
Neisseria growth, 15415
in soil. (See under *Soil*.)
Carbon dioxide, assimilation. (See *Photo-
synthesis*.)
in blood. (See under *Blood*.)
carbonic acid, formation from $\text{CO}_2 + \text{H}_2\text{O}$,
buffers as affecting, 7380
circulation time detm. by, 13115
for control of *Rhytidoderus* on crucifer
roots, 15934
in dentine, 4350
detm. in tissues, 14481
diffusibility through animal membranes,
..... 12650
effect on:
absorption of Ca by soils, 13861
acid-base balance and blood cells,
dog, 12643
amylase activity in leaves, 12106
blood O_2 combining power, marine
fishes, 10930
blood plasma vol., 13129
blood pressure, 11179
carotid sinus receptors, 14754, 14781
coronary circulation, 14787
Carbon dioxide (continued)
effect on (continued)
development of bean rust, 5004
dormancy, potato tubers, 6589
dynamic constants of muscle, 12643
electrocardiogram of crawfish, 11201
erythrocytes in sickle cell anemia, 16912
hemolytic streptococci in blood or
serum, 8115
insulin convulsions, 4136
 O_2 utilization by fish, 12643
peripheral blood flow, 16747
photosynthesis, 1380, 1381
respiration, apples, 10325
frog, 9274
soils, 1222
storage of sweet cherry, 6676
vit. C in fruits and vegetables, 1271
in egg, equilibria, 9821
in fruits, detm., 14014
inhalation, in bronchopneumonia, dogs,
..... 10393
effect on cardiac effects of low atm.
pressure, 479
insensitivity of diving animals to, 3781
as measure of standard metabolism, 284
in potatoes, factors affecting, 10826
production. (See *Fermentation*; *Metabo-
lism (respiratory and energy) and
(tissue and cellular)*; *Respiration
(plant)*.)
relation to sunstroke, 1389
in removal of FI from drinking waters, 2419
respiratory vagal reflexes and, 371
response to, O_2 tension of inspired air
as affecting, man, 12643
rôle in Ca metabolism, mollusks, 9080
in photosynthesis, 14009
in soil. (See under *Soil*.)
tension, effect on alkali reserve of fish,
..... 370
on peripheral circulation, 4065
on saline absorption from sub-
arachnoid space, 10883
in fresh waters, tolerance of fish for,
..... 10810
transfer from soil to leaves, 12083
as soil disinfectant, vs. *Armillaria
mellea*, 17843
for tomatoes, 3169
Carbon disulphide, in viscose rayon mig.,
toxicity, 7919
Carbon monoxide, effect on:
blood pressure, cat, 14823
carotid sinus reflex, 4080
 O_2 consumption of *Drosophila* pupae,
..... 3785
thyroid gland, 3896
poisoning, effect on blood colloid os-
motic pressure and proteins, 12760
rabbit, 2107
on food intake and gastro-intes-
tinal motility, rat, 12915
gastric acidity in, rabbit, 7364
recording of COHb in arterial blood
during, 2316
tolerance, altitude as affecting, mice, 3835
Carbon tetrachloride, effect on adrenal
cortex, 12187
fumigant, for sweet potato weevil,
..... 14586
hepatic cirrhosis due to, pig, 511
poisoning, Ca action in, 2111
liver damage by, ligation of single bile
ducts as affecting, 3749
protection against by xanthine, rat,
..... 2108
and repair, man, 2235
liver substance and xanthine as anti-
dotes, 1562
as vermifuge, calves, 6824
Carbonate, amt. in mollusc, 6824
Carbonyl chloride. (See *Phosgene*.)
Carcharhinus (p.1879³), teeth succession
in, 9701, 2445
platyodon, invading Mississippi R., 3381
Carcharias (p.1879³), teeth succession in,
..... 9701, 2445
Carchariidae (Elasmobranchii), p.1879³
Carcharodon (p.1879³) *carcharias*, in Florida,
..... 18050
in Gulf of Maine, 5157
Carcinoma(s). (See *Tumor*.)
Cardamine (p.1865³), tax., 13776
Cardamom. (See *Elettaria cardamomum*.)
Cardiac. (See *Heart*.)
Cardiazol, antagonism to epinephrin,
..... 12643
bioassay and excretion, 9549
in cerebral cortical localization, rabbit,
..... 5867
convulsions, effects, 7908
exptl., clin., 16949
effect on:
alcohol depression, 13178
autonomic nervous system, 13153
barbiturate depression, 13188
blood pressure, 4171
bones, 11250
brain metabolism, 4138
Ca and K in blood and nervous
system, 13157
circulatory system, 7765
encephalogram, 4033
heart, frog, 7774
heart block, 2317
heat formation in brain, 7760
hypothalamic functions, cat, motion
picture, 2237
lactic acid in brain, 5788
narcotic activity, 16765
thioarbiturate action on heart, 525
expectorant action, 5758
fate in body, 13178
in schizophrenia, electrocardiogram,
..... 14774
use in ether overdosage, 13178
Cardidae (Mollusca), p.1872⁴
† *Cardinocrania* (p.1871³), young of
Richthofenia, 12310
Cardiopteridium (p.1864³), foliage (Cb),
seeds associated with, 10095
Cardiospermum (p.1866³), spp. embryogeny
and relationships, 4806
Cardium (p.1872⁴), n. sp. from Bavaria,
Jurassic, 15943
larva described, 3301
Carduelis (p.1882⁴) *cannabina*, appropriating
nest of *Sylvia*, 5194
cannabina, bird banding, 14296
Caretta caretta, host of *Lophotaspis*, 5111
Carex (p.1864³), n. spp., 6393, 6394, 8426
new records for Idaho, 4773
jemtlandica, note, 1119
pieta, sexual dimorphism, 6448
salina, dist., 17515
Carcharinus. (See *Carcharhinus*.)
Caribou. (See *Rangifer*.)
Carica papaya, determination of sex, 5315
Erysiphe cichoracearum on, 1482
sex determination, sex linkage, 10728
Caridea (Crustacea), p.1874³
Caridina (p.1874³), spp. transf. and n.
ssp., 12826
Caries. (See under *Teeth*.)
Carlowrightia (p.1867³), n. sp., 6487
Carmine, effect on gastro-intestinal mo-
tility, children, 9262
as indicator in flocculation test, malaria,
..... 6753
Carnation, *Protostrophus* n. sp. (beetle) on,
storage of cut, factors affecting, 13901
Carnivora (Mam.), p.1883¹
dentine, structure, 13307
of *Eugene*, Utah, 5225
fibre follicles, arrangement, 13286
wild, as reservoirs of *Rickettsia cante*,
..... 8219
Carnosine, chem.- and significance, 9506
grouping for pressor action, 7770
and related compounds, structure vs.
depressor activity, 5764
Carolinata cyperi, as vector, of sugarcane
mosaic, 15832
Carotenoids. (See under *Pigments*.)
Carotid body, chemoreflex vasomotor re-
actions, efferent pathways, 12643
temp. variations, respiratory and vaso-
motor effects, 12919
Carotid ganglion, origin and development,
..... 9763
Carotid sinus, cardiac depressor mecha-
nism, respiratory accelerator ac-
tion, 16583
in chem. control of respiration and
circulation, 9519
circulation reflex, in Co poisoning, 4080
denervation, effect on syncope attacks,
..... 4062
development in Equidae, 11377
extra-vagal component in depressor re-
sponse, 505
functional pressor activity in, 12643
pressure, effect on renal blood flow and
urinary flow, 16649
receptors, chemo-, reflex response of
'apneustic' center to stim., 9275
presso- and chemo-, 14781
sensitivity, chemicals and, 14754
in Valsalva expt., 13135
reflexes, drugs as affecting, 2296
venous pressure in Syncope, 498
sensitivity in renal hypertension, 503

- Carotid sinus** (*continued*)
stimulation, effect on heart,7704
tetramethylammonium comp. as
affecting,5745
- Carotin.** (See under *Pigments*.)
- Carp.** (See also *Cyprinus*.)
Chinese gold, fat necrosis of pancreas,
.....2711
classification,1638
Pseudomonas punctata infection and ag-
glutinin formation,8165
- Carpel(s).** (See also *Flower*; *Gynoecium*;
Pistil; *Sporophyll*.)
origin in *Salix*,1169
structure and morph. monograph,
.....11918
- Carpenter, G. H.**, portrait,7075
- Carpenter, William Benjamin**, biography,
.....16146
- Carpocapsa** (p.1877?) *pomoneilla*. (See also
Codling moth.)
control of,10395
.....10397, 10398, 10401, 12173
.....12175, 12234, 12239, 14149
life hist.,14104
migration of newly hatched larvae,
.....14113
- Carpocoris pudicus**, ecology,12580
- Carpodacus mexicanus frontalis**, nesting,
.....5307
- roseus*, biology,16072
- Carpolithus** (p.1867?) *cistoides* (N),
.....4725
- Carposina** (p.1877?) *adrepitella*, on rasp-
berry, parasitized by *Apanteles* n.
sp., New Zealand,10458
- Carposinidae** (Lepidoptera) p.1877?
- Carré's disease** of dogs. (See *Encephalo-
myelitis*.)
- Carriers.** (See also *Fomites*; *Insects*, as
vectors; *Rats*; *Reservoirs*; *Ticks*;
Vectors; and other *vectors*; and
under specific diseases, e.g., *Ma-
sala*, *Typhoid*, etc.)
amebic cyst, incidence,17914
of amoebiasis,12272
of *Capillaria* ova,8691
of diarrheal diseases, detection,8294
diphtheria,4464
exp. guinea-pig,17382
Schick test and, after immunization,
.....7815
school statistics,6207
toxoid as affecting,17200
diphtheria bacillus types in,17381
of *Endamoeba histolytica*,15335
of infections, cantharides blister for
detecting,18625
influenza, serodiagnosis by Abderhalden
reaction,19826
of *Leptospira icterohaemorrhagiae*, white
rats as,15328
of livestock diseases, wild animals as,
.....8321
paratyphoid, dog as,10007, 11696
of plague,18637
rat survey in China,11718
serodiagnosis,13441
of psittacosis,8310
of 'Q' fever, bandicoots as,8196
of rabies,11674
bats as,9956
of respiratory tract infections,15318
of *Tryp. cruzi*,14172
of tuberculosis, monkeys as,11708
typhoid,6212, 10022
case studies,11717
detection methods,13448
incidence,10015
serodiagnosis, by Vi-agglutination,
.....8101
of typhus,10023
rats as,10080
- Carrión**, botulism in livestock from in-
fection,6224
- Carrissio, Luis Wittnich**, biography, 7080
- Carrot(s).** (See also *Daucus carota*.)
carotene in isolation,5555
culture, on muck soils,1238
in diet, effect on resistance to O_2 want,
.....2007
rot (*Mycothoria albicans*),12130
tissue culture, solution for,17700
of tubercles,1374
with use of indolylactic acid, 14005
- Cartilage**, collagenous fibers, arrangement,
age as affecting,5910
mechanical significance,9706
costal, calcification,15706
formation, in prostatic cancer, 14873
growth, gonadectomy and pituitary ex-
tract as affecting,9373
in heart of cattle,5587
hyaline, calcification, man,2252
- thyroid and K feeding as affecting,9211
- Cartography**, analysis of weather maps,
.....16241
plankton distr. in sub-Arctic and At-
lantic waters,14395
of plant areas, Austria,7207
- Carum copticum**, volatile oil formation in,
kinetics,1342
- Carvasept**, in trichinosis therapy,8713
- Carya** (p.1865?), n. f.,6381
- Caryophyllaceae** (Dicotyledones), p.1865?
- Caryophyllaeidae** (Platyhelminthes),
p.1870?
- Caryophyllene**, chem. structure,1339
- Caryophyllin**, chem.,12047
- Caryospora** (p.1868?) *simplex*, in intestine
of snake,12286
- Cascara**, extracts, vacuum drying of, 1314
- Casein.** (See also *Cheese*; *Milk*; *Proteins*.)
in butter milk, compared to lactic acid
type,6009
catalase action,14450
cystine liberation by tryptic digestion,
.....12667
in diet, effect on regeneration of blood
albumin,1999
fluorine in pure vs. crude,15107
formation of deopcasein from,10975
fractional precipitation,13365
metabolism, methionine as affecting,
.....2025
number, mastitis diagnosis in milk by,
.....4684
-papain culture medium,2629
relation to Hammarsten's protease,
.....13866
from soybeans, hardening agents, 11934
synthetic fiber from,13885
tyrosine formation from by peptic di-
gestion,5452
variation during lactation,4414
- Cassini** intradermal reaction, non-speci-
ficity in hydatid disease,14168
- Cassava.** (See also *Manihot utilisima*.)
bud sports,17636
culture and use,6510, 6511
diet, pathology due to cyanides in,
.....13145
leaves, nutritive value,271
mosaic, field dissemination,4979
vit. B₁ and flavin in cooked and raw,
.....9224
- Cassia** (p.1865?), in dung of ground sloth,
.....7048
- Cassididae** (Mollusca), p.1872?
- Castanea.** (See also *Chestnut*.)
immediate effect of pollen on fruit,
.....12534
sativa, rootrot, due to *Phytophthora* spp.,
.....15793
- Castanopsis** (p.1865?), n. spp.,1125
- Castellanella** (p.1868?) *brucei*, morphology
vs. source,969
- Castellania** *castellania*, bacterial strains
from epidemic infantile dysen-
tery related to,18611
- Castilleja** (p.1867?), n. spp.,2882, 6339
- Castor bean.** (See also *Ricinus*.)
lipase, specificity,14456
seed and oil, chem.,12016
- Castor** (p.1882?), (See also *Beaver*.)
canadensis, survey, Minnesota,10819
(PI), from Tennessee cave,12443
concisor,18107
taylora,10659
- Castoridae** (Mammalia), p.1882?
- Castroda** (p.1869?) *lutheri*, ducts genito-
intestinalis of,12294
- Castration.** (See also *Gonad.*, *ablation*;
Ovary ablation; *Testis ablation*.)
effect on gonads and accessory sex
glands, opossum,16992
on prostate and seminal vesicles,
monkey,16991
- Casuaridae** (Aves), p.1881?
- Casuariformes** (Aves), p.1881?
- Casuarina**, method of watering, malaria
control and,15970
in Solomon Islands,11898
- Casuarus** (p.1881?) *casuarus*, internal ear,
anatomy,7931
- Cat(s).** (See also genera, e.g., *Felis*.)
adrenal gland, innervation,16979
adrenal medulla, nerve supply,16976
anatomy, guide book,16954A
aurealis, Purkinje tissue in,19687
bile salts, circulation, study,5595
blood O_2 - CO_2 in normal and decerebrate
pregnant,3651
brain, cortical projection of medial
geniculate body,7960
lesions of pyramids and red nucleus,
effects,11891
- tract, tegmenti medialis, connections
with inferior olive,7953
- cerebral cortex, cell size,677
- dental arches, growth,4357
- development of *Ligule plerocercoids* in,
.....6739
- distemper. (See *Distemper*.)
- dog *Strongyloides* uninfected to, 10479
- dorsal roots, lumbo sacral, section, in-
tact fibers in, origin,2436
- estrus produced by gonadotropin,
.....11101
- exptl. *Tryp. evansi* in,12259
- genito-urinary diseases,15378
- hearing pathway in,14702
- helminths, Egypt,10480
- hypophysis, vascular supply,13295
- Japanese, tuberculosis-susceptible,
.....13665
- kidney, epithelial cell shapes in first
segment of prox. tubule,15028
vascular supply, degenerating
glomeruli and,13294
- kittens, pathogenicity of *E. histolytica*
for, prolonged cultivation as af-
fecting,6746
- leptospirosis,1011
- liver sinusoids, cells lining, origin,
.....15061
- lymphatic pathway from nose and
pharynx,676
- mammary gland, carcinoma,4204
- menopausal urine extract as affecting
sex organs in immature ♀,16633
- myocardium, innervation,9689
- Nephridiaacanthus* in,3285
- Opisthorchis* from, life span in vitro,
.....8683
- ovary, interstitial cells as endocrine
cells, review,15020
- phrenic nerve, sensory components,
.....11392
- reproductive system, estrone as
affecting,16993
- respiratory movements in fetus,373
- blood gases and,3977
- sinusitis etiology,2646
- small intestine, wandering lymphocytes
in, hist.,15040
- spaying in,15387
- stomach, exptl. amebic infection, 10495
- tongue muscles, movements,710
- trichinosis, incidence, New Orleans,
.....16904
- tuberculosis, incidence,8297
transmission from man to, 8295, 8297
- vaginitis, paracolon organism in, 11727
- virus disease,6169
- Catabolism.** (See *Metabolism*.)
- Catachloporis** (p.1877?) *borgmeieri*,12370
- Catalpa speciosa**, flowers, as food for sphinx
moths,5030
- Catalysts.** (See also *Enzymes*; *Growth*, *ac-
celerator*s.)
discussion,16329
iron, effect on lipid membrane forma-
tion,16302
metal, for tubercle bacillus,10090
- Cataphoresis.** (See also *Dielectrolysis*.)
of adsorbed pollen extracts,15128
of ant. pituitary proteins,11070
- apparatus.**3599
of biologically active material into
skin,10833
blood proteins separated by,7351
of epinephrin through skin in asthma
therapy,14783
immune sera and antibody preps.
studied by,2582
of infusions of drugs,510
measurements of proteins,12658
motility of red cells and ghosts,7829
of pepsin,197
of *Vibrio* strains,1058
- Cataphracti** (Pisces), p.1880?
- Cataphracti.** (See *Bud*; *Leaf*.)
- Cataract**, blood P changes in,11825
after carotid sinus denervation,4062
congenital, a family history,1792
diminophenol causing,4197, 9479
in eye of horse,2694
galactose causing, thiamin and ribo-
flavin as affecting,2065
gene for, *Rattus*,8945
intracapsular extraction, sucking disc
for,7641
nutritional, and relation of galactose to
appearance of senile suture line,
rat,7642
production, rôle of silicate in,12643
xylose causing,12774
- Catarrh**, malignant, in domestic vs. wild
animals,11750

Catatonica. (See also under *Psychoses*.)
bulbocapnine causing, chimpanzee, 14803
Catechin, relation to flavones and antho-
cyan, 6612
Catenella spp., of economic value, Burma,
8043
CATENOCYTRIDIUM (Fungi) (p.18613)
carolinianum, 17484
Catenotaenia (p.18704) geosciuri, from
Geosciurus, 15987
Caterpillar. (See also *Butterflies*; *Lepi-
doptera*, *Moths*.)
fat body, hormonal action on implanted
epithelium, 12981
social behavior, 12398
tent. (See *Malacosoma*.)
Catfish, color change, rôle of melanophore-
dispersing hormone of pituitary
in, 2132
Catgut, hypersensitivity to, in wound dis-
ruption, 9883
Cathartics, bioassay, in *Daphnia magna*,
4164
in monkeys, 13178
habituation, 12643
saline, effect on intestine, guinea pig,
9551
in trichinosis therapy, 8713
Cathepsin. (See under *Enzymes*.)
Catheters, sterilization, technic, 15323
Cathode rays, electron tube for produc-
tion, 7281
Catillaria (p.1862), tax., 6364, 17503
Cation(s). (See also *Electrolytes*; *Ions*;
and under specific cations, e.g.,
Calcium.)
in corn plants, soil pH and form of N
as affecting, 13979
effect on:
absorption of prune pure by plant
cells, 13973
acetylcholine liberation by brain
tissue, 14660
Ligia, 5426
muscle electrical impedance, 11147
12643
phosphorylase activity, 5451
potential rhythm of brain, 5696
sensitivity to light, *Peranema*, 12653
in erythrocytes, 7250
exchange in soil, effect on availability
of P, 10208
lyotropic series in swelling, 5431
Catkin. (See *Inflorescence*.)
Catalcalinae (Lepidoptera), p.18771
CATONOIDES (Hom.) (p.1875), n. sp.,
8785
Catopsalis (p.1882) †, n. spp. (E), 18094
Catopsis (p.1864) *nutans* v. *stenopetala*,
2841
Catostomidae (Pisces), p.1879a
Catostomus (p.1879), biology, 10814
commersonnii, age and growth of ♀
and ♂, 8819
diurnal activity, 14419
Cattle. (See also *Meat*.)
abnormal milk from cows free of udder
streptococci, 8339
abortion, non-*Brucella* agents, 15364
tuberculosis and, 4237
accessory lungs in, 762
acetonemia and nervous disturbances in,
vitamin relations, 2692
Babesiella in, 8719
beef, body gain with and without pro-
tein supplements, 13356
breed comparison, 6000
calves, creep vs. non-creep fed, 2491
feeds for, blue stem grass as, 9804
corn and legume hay as, 5981
meat-meal tankage vs. cottonseed
meal as, 13355
molasses as corn substitute, 13357
protein supplement, level required,
2486
forage-plant consumption by, 9801
grading dressed carcasses, 15098
growth, plane of nutrition as affect-
ing, 5977
on range, Ca, P and protein supple-
ments to, 15101
rate of stocking, 15099
roughages for, sorghum silage, peanut
hay and cottonseed hulls as, 777
slaughter grade, from wt. and mea-
surements, 9802
wt. gain vs. carcass grade, factors
affecting, 774
blood, oxidative capacity, 15104
blood comp. as affected by age, gesta-
tion and lactation, 13036
blood counts in health vs. brucellosis,
1009

Cattle (continued)
blood P in, 1972
botulism in, cause and premunition in
Australia, 6224
toxoid vaccination, 6120
breeds, Africanander, history and color,
2481
Indian Nellore, hemoglobin, factors
affecting, 16423
Sahiwal, improvement, 15105
vit. C in milk and, 5569
breeding, estrogens and gonadotropin
as affecting, 16628
for milk- and butterfat-production,
Holstein-Friesian, 12549
Brucella abortus incidence in saliva vs.
salivary glands, 15363
localization in uterus, 15362
brucellosis in. (See under *Brucellosis*.)
bull, breeding efficiency of proved, 773
calves, *Bartonella* infecting (?), 2708
blood picture in health and under
parasitism, 12745
carotene in nutrition, 9811A
control of helminths, Philippines, 1562
deformities in, 2697
disorders on milk ration, 17082
embryotrophic nourishment, 6125
Eperythrozoon wenyonii infecting, 2708
exptl. infection with *Anaplasma* from
buffalo, 14175
feeds for, comparative value of
various protein concentrates, 15095
skim milk powder as, 9806
whole milk plus potatoes, 17078
filariasis, Dutch E. Indies, 3245
helminths, viability on pasture, 12244
hydrocephalus (subdural) in, 6256
immunity transfer to newborn, 6125
leucemic lymphoblastoma, hemato-
logic and histologic study, 608
Mg in blood, 248
monstrosity in, 15085
myiasis, Brazil, 3203
paratyphoid spread by rats to, 2709
physiological response to mineralized
milk, 13860A, 17083
raw vs. pasteurized milk for, 9805
two headed, 13339
urea in spinal fluid, 16433
vit. A deficiency in, 11004
vit. D requirement, 11494
caseous lymphadenitis in, source and
etiology, 11756
Clostridia in feces after silage feeding,
6291
cobalt-deficiency disease in, 17385
coccidioidomycosis in man and, patho-
genesis of initial acute stage, 6204
coccidiosis in. (See *Coccidiosis*.)
coliform bacteria from milk and feces,
classification, 1061
conformation, relation to anatomy, 6002
congenital porphyria in, cow, 6233
porphyrin excretion in, 6246
contagious pneumonia, transmission and
immunity relations, 11747
contagious typhus. (See *Rinderpest*.)
dairy. (See also *Milk*.)
acetonuria, silage in ration and, 4412
agnathia, a new lethal, 8949
artificial insemination, 778
8065, 15091
average records vs. high records, 15103
blood comp. in, comparison with yaks
and their hybrids, 8954
bulls, proved, list, 2501
carotene in plasma on winter vs.
pasture ration, 17085
fasted, milk comp., 13362
feeds for, A.I.V. vs. molasses, silages,
17068
ammonium bicarbonate as protein
substitute, 17087
alfalfa as, effect of curing method,
5997
cacao shells as, 6008
limited vs. liberal grain on pasture,
782
meat meal as a pasture supple-
ment, 17084
mulberry leaves, effect on milk
production, 779
oils as, effect on butterfat, 4409
protein, source and level, 11495
protein supply, review, 9818
silage as, effect on milk production,
772
silage combinations in rations as,
8089

Cattle (continued)
dairy (continued)
feeds for (continued)
S. Africa, 15546
urea as protein substitute, 13358
herd management and production,
factors influencing, 13860
improvement, 11496
milk comp. of various breeds, 15110
milk production. (See under *Milk*.)
parturient hemoglobinemia in, 15373
pasture for, S. D., 1195
reproductive efficiency, 9819
sex ratio and services per conception,
factors affecting, 8091
vit. D, effect of season and feed on,
780
utilization from alfalfa and prairie
hay, 17086
wt., milk energy yield and, 2484
disease incidence, stable conditions and,
4674
East Coast fever. (See *Piroplasmosis*.)
encephalomyelitis or encephalitis as
associated with *Listeria* in, 11736
energy metabolism during lactation,
287
ephemeral fever, Australia, 6250
exptl. *Tryp. evansi* in, 12259
external auditory meatus, position,
racial differences in, 4814
fasting as affecting blood fats during
lactation, 305
feeds for, Ca and P assimilation and,
7455
vit. A supplements in cottonseed
meal, 16507
feed consumption, appetite and, 5978
fodder, and human nutrition, book,
18689
foot-and-mouth disease in, prophylaxis,
8822
glandular tissue, elements in, spectro-
graphic analysis, 13315
glycerides in depot fat, 303
Gongylonema in, U. S., 17907
grub, distr. determined by soil moisture,
5057
heart, bone formation in, 5387
horn flies on, control, 15915
as host to *Schistosoma spindale*, 1544
hypomagnesemia (seasonal) in, 1008
immunity in, transfer to calves by lac-
tation, 6125
infectious abortion. (See *Abortion, in-
fectious*.)
intestinal helminth nodules, 10500
intussusception in, 8326
leukosis, etiology and general account,
6228
licking disease, etiology, 17389
liver abscesses, bacteriology, 1017
long bones, wt. and comp., bilateral va-
riation in, 9708
lung tissue, bases in, 12801
mastitis in. (See *Mastitis*.)
milk loss and muscle degeneration due
to *Hypoderma* larvae, 12228
multiple pregnancies in, 11478
new Nematode in conjunctival sac,
14215
nutritional physiology, 4405
onchocerciasis, *Culicoides* as vector,
6719
origin, remains from French cave, 5211
O₂ dissociation curve of blood in new-
born calf and pregnant cow,
7378
Pasteurella bovisseptica in carcasses, sig-
nificance, 6248
pellagra in, 11735
P deficiency in, 15090
pineal gland, striated muscle fibers in,
11410
piroplasmosis. (See under *Piro-
plasmosis*.)
pleuropneumonia in. (See under *Pleuro-
pneumonia*.)
preventive inoculations, statistics, 8166
quintuplets in, 11483
rabies transmission by bats to, 9956
range, growth studies, 15101
redwater. (See *Piroplasmosis*.)
retina, Cs content, 5920
rhinosporidiosis in, Madras, 3251
schistosomiasis in, and control, 1545
sex ratio in, 16628
site of fat synthesis in mammary gland,
2162
skull, anatomy, 711
steer, exptl. equine trichostrongylosis
in, 15950
streptococci (human beta hemolytic) in
udder, significance, 1016

Cattle (continued)

- Streptococcus zymogenes* in intestines,8342
 surra in, India,17908
 survey in, Rhodesia,2717
 sympathetic ganglia, structure,11394
 Texas fever. (See *Piroplasmosis*.)
 theileriosis. (See *Piroplasmosis*.)
Trichophyton immergeus infection in,4643
Trypanosoma congolense infection, im-
 munization for,944
 trypanosomiasis. (See under *Trypano-
 somiasis*.)
 tuberculosis. (See *Tuberculosis, bovine*.)
 tuberculous metritis in, methods of
 contagion,2704
 in Turkey, discussion,11489
 udder. (See udder under *Mammary
 gland*.)
 urinary and blood bases in,13012
 wt. gain, on range pasture,15099
 wild, parasites, Hawaii,17916
 Cattle grub, Northern. (See also *Hypo-
 derma bovis*.)

Cattle-plague. (See *Rinderpest*.)

- Cattleya autumnalis*, descr.,5013
Caudata (Amphibia), p.1880¹
Caudotestis (p.1869³) *neopercis*,6803
Caulacanthus (p.1860⁴) *ustulatus*, tetraspore
 development,1065
Caularehus (p.1880⁴) *meandricus*, descrip-
 tion,5151
Caulerpa (p.1860²) tax.,2793, 8413
Caulerpaceae (Algae), p.1860²
Cauliflower(s). (See also *Brassica
 oleracea*.)
 cecidomyids on, control,3188
 culture and pests, Ceylon,13876
 roots, *Rhytidoderus* attacking,15934
 winter. (See *Broccoli*.)

CAULOXYLON (Gymnosperm) (p.1864¹)

- ambiguum* (K.),13718
 Caustic soda. (See *Sodium hydroxide*.)
 Causyth, in trichinosis therapy,3713
 Cauterization for tinea in horse,11731
 Cavanilles, redescription of ferns col-
 lected by,1097
 Cave(s), and cave faunas, of France,15942
 colonization with fauna, flood factor in,
12573
 Rotatoria in,14219
Cavia (p.1883¹). (See also *Guinea pig*.)
 cytoplasmic components of developing
 egg,1716
Caviidae (Mammalia), p.1883¹
Cagaponia (p.1867³), n. sp.,6437
Ceanothus (p.1866²), tax.,6412
 (N)17475, 17532
thyrsiflorus, range extension,2866
Cebidae (Mammalia), p.1882²
 taurodontism in,11439
Cebus (p.1882²), cells of motor area,
 nuclear vol.,677
capucinus, new host for *Protoplasma*,
15955
Cecidia. (See *Galls*.)
Cecidomyiidae (Dipt.), p.1877². (See *Gall
 midges*.)
 on cauliflower, control,3188
 predators of aphids, Ont.,10451
 Cecum. (See under *Intestine*.)
 Cedar. (See also *Cedrus*; *Chamaecyparis*;
Juniperus; *Libocedrus*; etc.)
 buds and branching,4762
 red (*Juniperus*) native, blight (*Phomopsis
 juniperovora*) on,3169
Cedrela mexicana, effect of seed storage on
 germination,8518
Cedrus (p.1864¹), spp. notes,6378
deodara, thinning practice,10236
Cedra (p.1866²) *pentandra*. (See also
Kapok.)
 development of ovuliferous hairs,4811

- Celastraceae* (Dicotyledones), p.1866¹
Celastrus (p.1866¹), n. spp.,15504
Celerio (p.1876⁴), morph. of abdominal
 somites,3358
Celery, aphid as virus vector,3348
 changes in storage,1281
 fertilizers as affecting,1258
 fertilizers for,13874
 late blight (*Septoria apici*), control,15880
 no. of spores per pyrenidium,15805
 mosaic (virus), control,10377
 hosts, properties and vectors,3132
 virus diseases,17778
Celtis disease, vit. A absorption in,16556
 Cell(s). (See also cell parts, e.g., *Chloro-
 plasts*; *Chromosomes*; *Cytoplasm*;
Mitochondria; *Nucleus*; etc.; prop-
 erties and processes, e.g., *Perme-
 ability*, *Cell division*, and also *Tis-*

Cell (continued)

- sue culture*, *Blood cells*, *Nerve cells*,
Tumor cells, and specific types of
 cells under organ where found.)
 activity, control by nucleus,8935
 adhesion, pectins as affecting, potato,
15793
 temp. as affecting, potato tuber,
1026
 apical, of meristem in spermatophytes,
 review,17557
 non-existent in *Cycas*,11917
 block, in *Nitella*, relation to pacemakers
 in vertebrate heart,1393
 comp. morph. in algae and fungi,6332
 components. (See *Cytoplasm*,
constituents.)
 cytoplasm and nucleus, in hypo- and
 hyper-tonic solns.,2473
 differentiation, effect on intercellular re-
 lations, grass roots,17560
 progressive,11449
 dimensions, in apple fruit, respiration
 and,10230
 form and movements, math. biophysics,
5434
 growth, *Helianthus hypocotyl*,1370
 u.-v. radiation as affecting,3570
 pH in different areas,12655
 inclusions. (See *Inclusion bodies*.)
 inheritance structure, irradiation ef-
 fects and,5472
 intercellular substance, rôle of lipoids
 in,10842
 isoelectric point,9086
 models, 3-dimensional, construction,
17558
 technic of making,5262
 periodicity,182
 permeability. (See *Permeability*.)
 plant, absorption of salts by, kinetics,
15701
 cold injury, mechanism,4946
 cytology in dormancy,8909
 as influenced by centrifugation, 8907
 by colchicine,3448, 8908
 intercellular exchange of substances,
 technic of study,6623
 physiology, relation to pure and ap-
 plied botany,4960
 storage of dye in, pH as affecting,
4922
 structure, studies with models,
Eupatorium pith,17558
 vital staining,1364
 water in, rôle and distr.,12093
 proteins, breakdown in starvation, tis-
 sue proteases as index,5442
 coagulation by x-radiation,16326
 respiration. (See *Metabolism (tissue and
 cellular)*; *Respiration, cellular*.)
 of Schwann. (See under *Nerve fibers*.)
 shapes, compared with compressed lead
 shot,11922
 in first segment of proximal tubule,
 cat.,15028
 in pith of *Eupatorium*,17558
 size, correlated with fruit size in
 cucurbits,10171
 periodicity in metabolism as related
 to,182
 phloem development related to flower-
 ing,10172
 surface, behavior during cleavage, 4397
 biology, book,7091
 dye reaction and,7997
 of tissue, effect on *Leishmania* morph. in
 culture,17928
 vacuole contraction, caused by vital
 staining,4951
 volume, salt solns. as affecting, yeast,
15396
 vol.-shape relationships,11923
 Cell division. (See also *Meiosis*; *Mitosis*.)
 in algae and fungi, book,6332
 in *Amoeba*,3266
 cytokinesis, omission in phloem fiber,
Nicotiana,1168
 in *Dientamoeba*,5105
 inhibition by neutron radiation,7319
 mechanism,4388
 multiple fission in *Babesidae*,8719
 structural and kinetic aspects,175
 Cell wall. (See also *Cellulose*; *Wood*.)
 cellulose orientation, X-ray and micro-
 scopic studies,17551
 deposition in *Celba* hairs,4811
 fibrillar nature, pine fibers,8448
 growth rate, effect on intercellular re-
 lations, grass roots,17560
 intercellular space, origin,2908
 microfibrils, chain-molecules and capil-
 lary spaces,8445
 middle lamella, staining with Bismarck
 brown,16116

- plasmodesma in algae,8377
 secondary, arrangement of structural
 units in, cotton fibres,17551
 structure, in *Avena coleoptile*,6445
 in *Cycas* stem tip,11917
 and development, oats coleoptile,
17705
 micellar,6620, 8447
 in roots,12510
 thickening in monocot. fiber,10169
 xylan formation in,13789
Cellulacilla, cellulose-decomposing spp.,
1033
Cellobiose. (See also *Cellulose*.)
 diazotized p-aminobenzyl β -glycoside,
 chemo-immunol. relations,833
Cellobiuronic acid, diazotized p-amino-
 benzyl β -glycoside, chemo-immunol.
 relations,833
Cellophane, bags, blood serum concen-
 trated and salts removed by, 12730
 blood serum dried in frozen state
 in,12731
 effect on a hemolysis production by
 staphylococci,4479
 Cellular reactions, to defatted tubercle
 bacilli and their products,902
 to *Nippostrongylus*,11572
 to tuberculo-proteins vs. lipids,901
 Cellulose. (See also *Carbohydrate*; *Cell
 wall*; *Cellobiose*; *Hemicellulose*;
Lignin; *Wood*.)
 cell wall in higher plants,8445
 chem., book,15764
 cotton, behavior in cuprammonium
 sols.,3102, 3104
 decomposition, capacity of *Piricularia*
 strains for,15850
 in composts, temp. as affecting, 6294
 in neutral salt sols., chem.,6619
 by *Plectridium spumorum*,13673
 by *Polyporus abietinus*,3139
 rôle of fungi and actinomycetes in,
11784
 digestion in *Zootermopsis*, rôle of intesti-
 nal protozoa in,7185
 dispersion and behavior, in cupram-
 monium sols.,3101
 extraction from sorghum, *Pomilio* proc-
 ess,8458
 from farm by-products,13842
 in hair-cap moss, chem.,4954
 micellar structure,6620
 micelles, relation to xylan formation
 and lignification,13789
 microorganisms destroying. (See also
 under *Bacteria*; *Fungi*; *Micro-
 organisms*.)
 orientation, in cell wall,6445, 8445
8447, 17551
 in *Cycas* stem tip,11917
 in pine needles, changes during aging,
17738
 in saprophytic fungoid alga,15433
 separation from lignin, method for use
 with fibers,6467
 from *Solidago*, chem. and props.,1319
 structure, hypotheses compared,1331
 micellar concept,17689
 Cellulose nitrate. (See *Colloidion*.)
Cellulibrio, cellulose-decomposing spp.,
1033
Celsia (p.1867²), embryo-sac and endo-
 sperm haustoria,13786
Celtis \dagger endocarps (N), of Poland,10100
kraussiana, descr. and distrib. in E.
 Africa,13767
 Cement workers, basophilic aggregation
 test in,5873
Cenchrus (p.1864³), anomalous inflores-
 cences,17514
albertsonii,17537
Centaurium (p.1866⁴), n. syn.,1158
 British spp.,10133
 Centipedes. (See *Chilopoda*.)
 Central nervous system. (See *Brain*;
Nerve; *Nervous system, central*;
Spinal cord.)
Centranthera (p.1865¹), spp., in Papus,
11895
Centrarchidae (Pisces), p.1880¹
 parasites, Florida,15948
Centrechinidae (Echinodermata), p.1872²
 Centrifugation, effect on:
Amoeba proteus,1730
 early development of *Rana* eggs, 742
 germinated seeds,1705
 mitotic spindles, *Rhynchelmis*,1728
 plant cells,8907
 polar spindles of eggs, *Chaetopterus*,
Cumingia,12512
 for isolation of tubercle bacillus,8236
 ultra- analysis of plant viruses by
 conc. of pituitary hormones by, 3913

- of immune bodies and normal bactericidal substances, 835
vaccinia Paschen bodies and, 2624
a virus particle size determined by, 15246
viscosities of tumor cells determined by, 3446, 4198
and vitellogenesis, *Gasterosteus*, 10724
Centrifuge, for estimating protozoan populations in liquid cultures, 6764
high speed, air driven, air bearing for, 233
speed-measuring devices for, 232
ultra, design and operation, 225
electrical magnetically-supported vacuum-type, 3596
for sedimentation velocity detn., 5497
Centriscidae (Pisces) (p.1879⁴), monograph, 3383
Centrocercus (p.1881²) *urophasianus*, *Eimeria* in, 14202
life history, habits and food, 9067
new Mallophagan from, 18038
new nematode from, 6800
Centrolepidaceae (Monocotyledones), p.1864⁴
Centrolepis (p.1864⁴), new to Indo-China, 1115
Centrolophidae (Pisces), p.1879⁴
Centropogon (p.1867³), n. sp., 6437
Centrosolenia (p.1867²), n. sp., 6437
Centrosome(s), behavior in atypical spermatogenesis, *Viviparidae*, 8918
Centrospermae (Dicotyledones), p.1865²
Cephalocis (p.1881⁴) *pilatus abieticola*, life hist., 12437
Cephalis (p.1867⁹), n. sp., 6437
Cephalin, as blood coagulation activator, 12754
coagulant action, 14503
detn., in body fluid and tissues, 16377
effect on blood coagulating power of trypsin, 10902
on complement, mechanism, 927
in organs, man, 16378
in plasma and erythrocytes in pernicious anemia, 2394
separation from α - and β -lecithin, 16385
Cephalina (Protozoa), p.1868⁴
Cephalobidae (Nematoda), p.1870¹
Cephalogonimidae (Platyhelminthes), p.1869³
Cephalogonimus amphiuma, in *Amphiuma*, 6716
Cephaloidophora (p.1868⁴), spp. in *Balanus*, 6766
Cephaloporus grinnia, *Dirofilaria* (Nematoda) from, 14216
Cephalopoda (Mollusca), p.1872⁴
nerve conduction, nerve diameter and, 4023
Cephalosporium (p.1862⁹), cellulose-decomposing spp., 1033
pathogenicity to elm, 10346
on sugarcane cultural characteristics, 1427
niveolanosum, from surfers foot, 13623
Cephus cinctus in Ohio, 8643
Cerambycidae (Coleoptera), p.1876²
Cerambycoidea (Coleoptera), p.1876²
Ceramiales (Algae), p.1860⁴
Cerapachys (p.1878⁹), n. spp., 14270
Cerastium (p.1865²), n. sp., 8444
Ceratitidis capitata, on orange, control, 8639
damage in Palestine, 6693
rosa, on orange, control, 8639
Cerattium (p.1868³), light requirements, 14396
thecal structure, 1579
hirundinella, as food for *Anaplas*, 1853
Ceratixodes (p.1874⁹) *uriae*, bipolar in distr., 6856
Ceratodiscus (p.1860⁴) *barkerii*, 15434
Ceratonereis (p.1871¹), *Nereis* spp. referred to, 17962
Ceratopsidae (Reptilia), p.1881³
Ceratopsoma (p.1873²), n. sp., 16014
Ceratospheeria (p.1861³), n. sp., 15453
Ceratostomella (p.1861³) *eps*, association with *Ips lecontei*, 12119
ulmi, on elm, correlation of external and internal symptoms, 12129
eradication progress in U. S. A., 1454
infection and resistance, 14082
..... 14089, 15811, 15853
official control, in Netherlands, 3144
quantitative detn. of susceptibility, 3169
resistance to in hybrids, 4988
status in Belgium, 14096
status in U. S. A., 1938, 3148
occurrence of coremia and perithecia in England, 12131
Ceratovacuma lanigera (Aphidae), associated with sooty mold of sugarcane, 1429
Ceraturgopsis (p.1877³), n. sp., (N), 5150
Cercaria (p.1870⁹), (See also *Trematoda*; and under genera of Trematodes.)
n. spp., 3298, 5106, 5109, 5110, 6789
..... 10537, 10542, 12291
..... 14205, 17946, 17947
species from *Goniobasis*, behavior studies, 17948
miracidia, attraction to hosts, 17946
catellae, larval stage of *Echinostoma*, 3279
concavocorpa (*Tetrapapillatrema*), 1597
Cercopidae (Homoptera), p.1875⁴
Cercopitheciae (Mammalia), p.1882²
Cercorchis (p.1870²), tax., 6783
stunkardi, in *Amphiuma*, 6716
Cercoseptoria (p.1863¹), n. spp., 17487
Cercospora (p.1863¹), n. sp., 17487
resistance to, in hybrids of wild and sugar beets, 12539
strawberry leaf spot (new) due to, 3169
haleniae, 10109
nicotianae, on tobacco, control by spraying, 8629
personata, on peanut, 3169, 6633
vaginae, physiology, 1476
zebrina, on sweet clover seed, 17750
Cereals. (See also *Maize*; *Wheat*; etc.,
Crops; Grain; also under genera,
e.g., *Zea*, *Triticum*, etc.)
corn and corn cobs, food value, 5990
diseases, black point, etiol., 12124
foot rot, control as affected by soil conditions, 5001
Fusarium, in Gr. Britain, 8600
in Manitoba, 3169
kernel smudge, etiol., 12124
open vs. self-pollination as factor, 17823
soil-borne, in Oregon, 14046
grasshopper injury, N. Dak., 17877
history of culture and origin, 8475
hormones in grain, vernalization as affecting, 17681
nursery seeder for, 11932
products, food value of Danish, 264
production statistics, Canada, 2940
proteins, egg replacement value and heat injury to, 10947
nutritive value, 10955
rickets and, 3741
root rot, research, in Canada, 17758
root injuries as factor, 10348
soil fungi affecting virulence, 17821
rusts, overwintering, in Italy, 4962
physiologic specialization, in Württemberg, 15854
research on, Germany, 1425
Sclerotinia graminearum on, control, 15881
environ. relations of infection, 15800
infection factors, 15804
life cycle and pathogenicity, 15809
seed-borne microorganisms, pathogenicity, 3169
seed disinfection, tests in Manitoba, 3169
starch in seed, sp. and var. differences, 17740
stem rust, barberry eradication as affecting, 15891
stripe rust (*Puccinia glumarum*), var. resistance tests, 3138
suitable for Neubauer test, vars. compared, 6475
variety trials, no. of replicated tests required, 10190
vernalization, low temp. and lack of O as affecting, 1188
viability in storage, factors affecting, 17743
vit. B, in, 14564
vit. C in germinating, 16534
water requirements, factors affecting, 4833
weeds in, sprays for, 13836
yield, factors affecting, 11933
mineral nutrition as affecting, 6487
Cereal mite. (See *Pediculoides ventricosus*.)
Cerebella (p.1863³), n. comb., 2811
Cerebellum. (See under *Brain*.)
Cerebroside, in brains of various spp., 5694
chemistry, 14722
detn., 1928
Cerebrospinal fluid. (See also *Body fluids*; *Complement fixation*; *Meninges*; *Meningitis*.)
albumin, in chronic polyarthritis, 16412
antibody passage to, 13486
antidiuretic substance in, 16636
antitoxin passage to, in immunization, 6102, 6103
barrier between blood and. (See *Hematoencephalic barrier*.)
cell study, in encephalitis due to equine encephalomyelitis virus, 629
colloidal reactions, in acute ant. poliomyelitis, 7913
effect on botulin adsorbed by brain, 2577
enzymes, cholinesterase in, 1941
halogens and thiocyanate in serum and, 13178
insulin shock as affecting, in schizophrenia, 7917
iodide, SCN, Brand CL distr. in, 7391
Lange gold sol reaction, diagnostic value, 3616
leukocytosis, in cerebral lesions, 11331
pressure, as influenced by:
atmospheric pressure, 7705
cerebral circulation, 2266
kaolin, 2319
sucrose and sorbitol, 2330
high, causes and types, 16407
effect on diuresis, 11091
reduction by sorbitol inj. into blood, 7379
protein, detn., 1930, 7303
passage from blood into, 14495
sulfanilamide in after intrathecal inj., 7868
in syphilis vs. yaws, 9611
urea in, calves, 16433
vit. B, in after inj., 16440
vit. C in, 9150, 14508
Cerebrospinal meningitis. (See *Meningitis*.)
Cerebrum. (See under *Brain*.)
Ceresa bubalus, in France, 3341
Cereus peruvianus monstrosus, *Fusarium* rot of, 17756
Ceriodaphnia (p.1873¹), race differentiation, 12319A
Cerithiidae (Mollusca), p.1872³
Cerostis (p.1876¹), seabraf, 14249
Ceropegia (p.1867¹), monograph, n. spp., 17541
Cerophyll, as source of vit. K, 16551
Cerotelium (p.1862²), n. sp., 17498
Certuna, malaria therapy by, 8178
malignant tertian malaria prophylaxis by, 6153
Cervidae (Mammalia), p.1883⁴
Cervix uteri. (See under *Uterus*.)
Cervus (p.1883⁴). (See also *Deer*.)
albistrotis, autoecology, in Thibet, 5223
canadensis. (See also *Elk*.)
elaphus, distr. in Gt. Britain, 16114
macneilli, autoecology in China and Thibet, 5223
Ceryle (p.1881⁴) *alcyon*, anomalous artery in, 9775
Cesium, in retinal layers from mammalian eyes, 5920
Cestoda (Platyhelminthes), p.1870³
in centrarchid fish, Florida, 15948
chapter, lab. manual, 10498
in dog and cat, Egypt, 10480
of horses, Hawaii, 17897
life histories, 15985
of poultry, ants as interm. hosts, 14160
Hawaii, 10477
rabbit resistance to larval, 17239
somatic infections, serodiagnosis, 14168
strobila, morph., 10539
of urodeles, Louisiana, 6716
Cestodea (Platyhelminthes), p.1870³
Cestraciontes (Elasmobranchii), p.1878⁴
Cetacea (Mamm.), p.1883². (See also *Whales*.)
monograph of Archaeoceti, 5235
Cetorhinidae (Elasmobranchii), p.1879¹
Cetorhinus (p.1879¹) *maximus*, morph. biol., 16048
Cetylquinolinium chloride, penetration of branchial epithelium by, 9082
Cervine, chemistry, 17666
Cevitamic acid. (See *Vitamin C*.)
Chabertia (p.1870²), in *Hydrocotyle*, 1604
ovine, in sheep, 5091
Chaconia (p.1862²), tax., 1076, 6347
Chaenobrytus gulosus, parasites, Florida, 15948
Chaetangiaceae (Algae), p.1860⁴
Chaetognatha, p.1871⁴
Chaetolepis (p.1866³), n. sp., 2882
Chaetomium globosum, induction of mutation by ultraviolet, 16179
Chaetonotidae (Gastrotricha), p.1871¹
Chaetonotoidea (Gastrotricha), p.1871¹
Chaetonotus (p.1871¹), n. spp., 6804
..... 14221, 14222

- Chaetophoraceae (Algae), p.1860²
 Chaetophorales (Algae), p.1860²
 Chaetopteridae (Annelida), p.1871²
 Chaetopterus (p.1871²), effects of centrifugation on polar spindles of eggs,12512
 eggs, permeability to water and solutes,18903
 staining by neutral red,176
 of unfertilized by neutral red,176
 factors locating first cleavage plane,7120
 pergaminateous, development without nuclei,13343
 variopiedatus, feeding method,17965
 Chaetopyrena (p.1862⁴), n. sp.,15453
 Chaetothyriaceae (Fungi), p.1861²
 taxonomy,13738
 Chaetothyrium (p.1861²), n. comb.,2811
 Chagas disease. (See also *Trypanosoma cruzi*)
 immunity to exp., transmission from mother to offspring,15177
 Machado test for, reliability,9995
 Chalchupa, extracts, effect on sympathetic nervous system,14843
 Chalcids (p.1880³) *moseri*, validity, 10637
 Chalcidoidea (Hymenoptera), p.1878³
 Chalcodermus (p.1876³) *aenus*, on cowpea, life history and control,3180
 hibernation and control of,17866
 life hist.,14118
 bondari, L.H., parasites, injury to cotton and control, Brazil,10414
 Chalina montagu, *Diporena* hydroid in,15983
 Chamaecyparis (p.1864⁴). (See also *Cedar*)
 susceptibility to *Goryneum cardinale*,4967
 lawsoniana, *Atrichobryum* on,17489
 growth in Switzerland,1283
 Phytophthora crown rot, control, 6680
 Chamaeranihemum (p.1867⁴), n. sp.,6437
 Chamaesiphon (p.1860²), n. sp.,8385
 Chamaesiphonaceae (Algae), p.1860¹
 Chamber, Sandison-Clark, for observation of rabbit ear tissue,3601
 Chameleon pardalis, *Foleyella* (Nematoda) from,14216
 Chameleontidae, eye, sclerotic plates, structure,5879
 Chamomile. (See also *Matricaria*)
 Chancroid. (See also *Hemophilus ducreyi*)
 chemotherapy,15199
 complement fixation test for,4504
 Ito test for, vaccines compared for,17344
 Chaos (p.1868²) *diffusus*, crystalline inclusions,3254
 Chaparral. (See also *Macchie*)
 litter accumulation in,7200
 undergrowth, water supply and,7199
 CHAPPUISIUS (Crust.) (p.1878³), n. sp.,8754
 Chaptalia (p.1867⁴), n. spp.,15500
 Chara (p.1860²), f.n. forms, n. var. (PL),17483
 vulgaris, electric polarity in, light and O₂ as affecting,4952
 Characeae (Algae), p.1860²
 Characites (J) (p.1860⁴), n. n. for, 17481
 Characinidae (Pisces), p.1879²
 Charactum (p.1860²), n. spp.,2789, 6881
 Charactopygus (p.1878³), n. sp.,6882
 Charadriidae (Aves), p.1881²
 Charadriiformes (Aves), p.1881²
 Charadrius (p.1881²), n. spp.,7015
 Characeae (p.1877⁴) *graminis*, L.H., food, bionomics, control and parasites, Scotland,12182
 Charales (Algae), p.1860²
 CHARAXIS ? (Algae) (p.1860⁴), .. (J) 17481
 Charcoal, in culture media, effect on growth of microorganisms, 11801
 Charophyta, Jurassic, of England,17481
 Charybdis (p.1874⁴), n. spp.,6848
 Chaummoogra. (See also *Hymenocarpus*)
 oil, effect on leprosy, vit. C and, 9627
 origin, comp. and pharm.,6556
 phosphoric acid-protein comps, prep. and comp.,4575
 Cheese. (See also *Casain*: Dairy products.)
Bacillus corallinus from,15423
 blue, steepsin in manufacture,17411
 brick, milk and starters for,8340
 Qa and P in British,4419
 cheddar, curd solubility in saline soln.,13373
 x-ray diffraction analysis of ripening,1041
 curd, measuring elastic deformation,13378
 Limberger, gas causes and control,10065
 poisoning by,2652
 surface flora, pH and salt as affecting,10066
 from milk of silage-fed cows, bacterial flora,6291
 rinds, comp.,13370
 Roquefort-type, ripening factors,1039
 sour-milk, bacterial discoloration, 6276
 Swiss, factors affecting starter cultures,1037
 flavor factors,6278
 grade, milk bacteriol. condition as affecting,2737
 tainting by volatile products of oranges,10042
 Tilsit, bacterial flora,6291
 propionic-acid bacteria in,6292
 ultraviolet irradiation,15402
 vitamins in,5549
 volatile acids in, estimation,4418
 Cheese mite, factors affecting,10420
 Chelanthus (p.1863⁴), n. sp.,1097
 Cheliospirura (p.1870⁴) *centrocercus*, from sage grouse,6800
 Cheliosporum sagittatum,8413
 Chelmatobrya (p.1877⁴) *brumata*, damaging oak in Rumania,15910
 Cheiranthus cheiri, hardness, relation to transpiration,15746
 Cheiridiidae (Arachnida), p.1874⁴
 Cheiridopsis (p.1865²), n. sp.,6408
 Cheirostylis (p.1865²), n. sp.,8426
 Chelodesmidae (Myriopoda), p.1878³
 Chelone mydas, *Rhytidodoides* from,17945
 Chelonellid, phylogeny,12333
 Chelonethida (Arachnida), p.1874⁴
 Chelonidae (Reptilia), p.1880³
 Chelura, critical notes,3307
 Chelydra serpentina, *Tetrapiplatremis concavocora* from,1597
 Chelyophorus (p.1878⁴) (D), relationships,12430
 Chelyosoma (p.1878⁴) *sibaja*, Oka body fluid,16415
 Chemicals, carcinogenic, relative potency,16538
 effect on aggregation of tadpoles in light,7615
 Chemistry, agricultural, modern uses,1947
 bio-, apparatus for amino acid study,1913
 books,1382A, 7245, 14439, 14440
 colloidal. (See under *Colloids*)
 dictionary,12490
 electro-, principles, book,5425
 handbook,12492
 immuno-,14440
 micro-. (See also *Ash*: *Microanalysis*)
 manual,12112
 of sugars in plant extracts,1413
 of wheat vars, tests of purity, 18810
 relation to biology,8831
 to plant breeding,8925
 synthetic drugs, book,18795
 Chemnitzia (p.1872²) *lehneri* (J),15943
 Chemoprophylaxis, in pneumococcus (type-II) infections,11574
 in scarlatina, seroprophylaxis and,11553
 Chemoreceptors. (See under *Sense organs*)
 Chemotherapy. (See also under the diseases treated, e.g., *Malaria*, *Pneumonia*; and under the specific substances employed, e.g., *Atebrin*, *Sulfanilamide*, *Sulfapyridine*.)
 acetylsulfanilamide value for,9938
 advances in,15210
 agents, effect on bacteriophages, 17283
 evaluation by manometric method,13641
 tests, in staphylococcal corneal ulcers in rabbits,15261
 agranulocytosis due to,17243
 to sulfanilamide,11598, 11605
 of amoebic dysentery,11611
 of amoebic hepatitis,11611
 in animal infections,17259
 by antypol,8175
 by aromatic As, S and nitro compounds,15208
 of arthritis,9938
 acute suppurative streptococcal,13551
 of avian eocidiosis (exp.),15200
 of bacterial infections,4577
 bacteriostatic action inhibited by peptide,11593
 of *Bacterium necrophorum* infections,6140
 of *Bartonella muris* infection,8199
 book,9917
 of bovine mastitis,1013, 6287, 15372
 of bronchopneumonia,13544
 Chemotherapy (continued)
 of brucellosis,6134, 6148
8189, 11519, 15266
 urinary tract infections,15276
 of canary-pox,15374
 of canine spreading peritonitis,4572
 of cerebrospinal fever,11607
 of chancroid,15199
 by chaummoogra-H₂PO₄-protein compounds,4575
 of coccidial infections,15182
 of diabetes,2655, 2660, 2664
 of diseases of small animals,11601
 of dourine,6135
 effect on:
Ascaris of pig in vitro,17267
 bacterial-toxin action in vivo,11580
Clonorchis sinensis in vitro,4552
 hemolytic streptococci in blood and serum,17263
 microbial dissociation,6154
 phagocytosis,6154
 pneumococci,8179, 15206
 resistance to bacterial endotoxins,6142
 thrombocyte count,6138
 of encephalitis due to equine virus,15239
 of equine diseases,11720
 of *Escherichia coli* infections,11587
 of *Escherichia coli* in vitro,13546
 exanthema induced by salvarsan,17242
 of Friedländer's bacillus infections,9914
 gall-bladder antiseptics, review,13541
 of gas-gangrene,17260
 of genital tract (upper ♀) infections,13539
 by germanin,8175
 of *Giardia* infection,6141
 of gizzard erosion in chicks,2691
 of gonococcal arthritis,2658
 of gonorrhea,806, 4574, 4578, 6132
6147, 9923, 9938, 11597, 15193
15204, 15264, 17558, 17262
 of hemolytic streptococcus infections,4565, 4566, 11591, 11600
 antisera combined with,4569
 of human and animal diseases,17281
 immunotherapy combined with,8185
 of infectious polyarthritides,9916
 of kala-azar,822, 2666, 11609
 of *Klebsiella pneumoniae* infections,17262
 of leprosy,13634
 of lobar pneumonia,13550
13629, 15216
 of lymphogranuloma venereum,17209
 of lymphoid tumors, by colchicine, mice,591
 of malaria,2657, 2663, 4560, 6144
6150, 6153, 8178, 8181
8183, 8187, 8188, 9930
11583, 13535, 13549, 13553
 avian,11584, 11590, 15183
 effect on infectivity of cases to mosquitoes,9915
 simian,13536, 15185, 15211
 of measles,11573
 of measles complications,11588
 with pneumonia,17255
 mechanism of action,11575
 of meningococcal infections,9914
11576, 17271
 of nagana,11608
 of *Neisseria* infections,9985
 of neurosyphilis,15195
 neurosyphilis fever-therapy plus, 15180
 by p-nitrobenzoic acid derivatives, 13545
 nitro group in,15208
 vs. amino-groups,13545
 by organic S compounds,2656
 of oriental sore,11581
 oxidizing agent formed by sulfanilamide plus surviving tissues,17253
 of oxyuriasis,17282
 of *Pasteurella* infections in birds, 11579
 of peritonitis (exp.),4555
 placental passage of sulfamide preps.,13538
 of pneumococcal infections,9928, 9934
9935, 9937, 17247, 17250
17259, 17262, 17271, 17276
 immunotherapy combined,17189
 of pneumococcal meningitis,13540
17265, 17266, 17272
 of pneumococcal pneumonia,4233
8176, 8180, 9926
11586, 13403, 13547
13604A, 15192, 15197
 with serotherapy,15191
15201, 17138

Chemotherapy (continued)

- of pneumococcal type-III pneumonia, alone and + serotherapy, 9918
 pneumococcus acquired tolerance to sulfanilamide, 15209
 pneumococcus antiserum therapy combined with, 13470
 of pneumococcus infections, 2662
 4564, 6152, 9914, 9929
 13537, 13544, 15190, 17273
 review, 11610
 type-I, effect on immunity, 11606
 type-II, 4556
 of pneumococcus type-II in vitro, 9925
 of pneumonias, 8174, 8177, 15194
 15203, 15216, 17213, 17249
 17254, 17255, 17270, 17366
 serotherapy plus, 17275
 of poliomyelitis, 920, 15207
 of polyarthritides in rats, 11582
 problems, review, 15210
 progress in, 6137
 prontosil effect on malarial infection of mosquitoes, 15186
 of prostatitis (chronic), 9933
 of psoriasis, 17277
 of pyomyositis (tropical), 17246
 pyrogenic, of syphilis in rabbits, 8186
 of rabies, 9921
 of relapsing-fever spirochaetes vs. *Trypanosoma rhodesense*, 13542
 of rheumatic fever, 2663
 of *Rickettsia* infection, 8218
 of scarlatina, 13427
 serotherapy plus, 15190
 of *Shigella* dysentery, 4567
 of spirochaete infections, 17244, 17245
 interference phenomena in, 824
 of staphylococcal infections, 15367
 17271
 of *Staphylococcus aureus* infections, 4549, 13544, 13546
 of streptococci in vivo and in vitro, 9919, 13546
 of streptococcal infections, 811, 2667
 4562, 9936, 13544
 15190, 15278, 17250
 17262, 17271, 17280
 alone and with serotherapy, children, 15198
 sulfanilamide and, 17281
 by sulfamide compounds, central nervous system retention, 13548
 by sulfanilamide, 2654, 4573
 6133, 6149, 6151, 6157
 9941, 9992, 11599, 15184
 15196, 15202, 15212, 15213
 by sulfanilamide addition compounds with cinchona-alkaloids, 13552
 by sulfapyridine, 2654, 2661, 8184
 and related drugs, photosensitization by, 9922
 by sulfonamide compounds, 4550
 6145, 15188
 by sulfones, 17262
 of surgical infections, 4553, 4554
 of syphilis, 816
 817, 852, 854, 855, 11589
 11592, 15179, 15273, 17264
 of tapeworms in poultry, 17279
 of tetanus, 9924
 textbook, 15427
 of trachoma, 2611, 11578
 of trichinosis, 11596
 of trichomoniasis, 542
 of tropical diseases, 17243
 of *Trypanosoma equiperdum* infections, 4568
 of trypanosome infections, 13543
 4680
 interference phenomena in, 824
 trypanamide, dermatitis due to, 4559
 of tuberculosis, 2659, 4551, 4557
 6143, 6156, 9920, 11603
 11604, 13554, 15189, 17257
 of tumors, by aldehydes and glucosides, mice, 5801
 by heptyl aldehyde and methyl salicylate, mice, 2374
 of typhoid (exp.), 9927
 of undulant fever, 6136, 15187
 15205, 17261
 of urinary-tract infections, 4558
 9931, 11577, 13534, 17248
 vaccine therapy plus, 17136
 of venereal diseases, 13633
 of virus diseases, 6146
 of Welch bacillus infections, 9914
 of wounds, etc., 17256
 Chemotropism. (See under *Tropisms*.)
 Chemurgy, 11947, 13842
 Chondroxycholeic acid, systematic decomposition, 15688

- synthesis by *Bac. coli communis* from dehydrochondroxycholeic acid, 13711
 Chenopodiaceae (Dicotyledones), p.1865²
 Chenopodiales (Dicotyledones), p.1865²
 Chenopodium oil, as vermifuge, calves, 1562
Chenopodium album, nitrate storage, 116
Chermes. (See also *Sacchiphantes*.)
nüsslini. (See *Dreyfusia*.)
 Chermidae (Homoptera), p.1875⁴
 Cherry(ies). (See also *Prunus*.)
 bacterial canker, identity of spp. causing, England, 3117
 brown rot (*Sclerotinia*), California, 10348
 var. resistance, Germany, 10368
 buckskin disease (virus), transmission and control, 3169
Coleophora pruniella on, Ore., 14109
 Duke and deriva., cytology, 16153
 fruit development hist., 15525
 gum pockets, microchem. study, 3169
 hardy stocks for, Poland, 3014
 leaf spot (*Coccomyces hemalis*), control, 3169, 15583
 spraying expts., 3169
 Richmond, rootstocks for, 1272
 silver leaf (*Stereum purpureum*), recovery from, 15589
 sour, fruit, hist., 15525
 storage, CO₂ and volatile fungicides as affecting, 6678
 tree(s), mortality, Michigan, 1257
 soils for, N. Y., 15587
 xylan formation in stone, 13789
 yellow leaf, new virosis, 17782
 Cherry casebearer, life history, 14109
Chersomanes (p.1881), n. subsp., 7023
 Chest. (See *Thorax*.)
 Chestnut. (See also *Castanea*; *Castanopsis*.)
 distr. in Lombardy, 13766
 in Italian Alps, 13766
Chettusia (p.1881) *gregaria*, distr., habits, 16073
 Cheyne-Stokes respiration. (See under *Respiration, alveolar*.)
 Chiasmata. (See *Chromosome*; *Meiosis*.)
 Chiasmotypy. (See *Chromosomes*; *Meiosis*.)
 Chick. (See also *Domestic fowl*; *Gallus*.)
 acetylcholine development in, 16843
 blastoderm, differentiation in vitro, 757
 eye-forming capacity in, 9759
 blood formation, liver extracts as affecting, 646
 brain, pretectal cell masses, structure and development, 16974
 cardiac jelly, nature, 13323
 cells, in Freund-Kaminer reaction for carcinoma, 9869
 chorioallantoic, avian plague virus culture on, 4579
 encephalitis virus culture on, 6164
 15247
 fowl-pox virus culture on, 957, 11570
 growth of normal and neoplastic tissues on, 14904, 15078
 herpes virus and antibody titrated on, 17124
 8104
 herpes virus culture on, 693
 human skin grafts on, 4592
 influenza viruses cultured on, 8212
 measles virus culture on, 8216
 murine-typhus virus culture on, 13466
 pigeon-pox virus culture on, 11570
 pseudorabies virus culture on, 13555, 13556, 15225
 15235
 psittacosis virus culture on, 15236
 950
 rabies virus culture on, 2630, 15245
Rickettsia culture on, 6166
 sheep-pox virus culture on, 2634
 trachoma *Rickettsia* culture on, 2611
 vaccinia virus culture on, 2620
 8201, 13560
 mouse culture compared, 15233
 variola virus culture on, 13574
 vesicular stomatitis virus culture on, 15221
 viruses cultured on, 9942, 11612
 collagen formation by osteogenic explants, vit. C as affecting, 8052
 as culture medium for:
 equine encephalomyelitis virus, 9904
 fowl-coryza virus, 4598
 fowl-plague virus, 9957
 leprosy nodules, 17318
 Rocky Mountain spotted fever
Rickettsia, 15134
Trichomonas foetus, 3267, 17900
 trypanosomes, 15963
 viruses, yolk-sac method, 15249

Chick (continued)

- development, catalase activity during, 11442
 normal stages in, 738
 embryo position vs. mortality, 734
 embryology, guide, 9765
 expl. infection with *Tryp. brucei*, 1541
 extract, tumor producing extract and, 576
 eye primordium, intra-coelomic grafts, development, 15080
 gonads, x-radiation as affecting, 12695
 heart, development electrocardiograph records during, 9760
 tissue, tolerance to a time-temp. factor, in vitro, 17049
 histiocytes in various tissues, 2467
 as influenced by:
 colchicine, 8050, 15072, 15078
Leptospira icterohaemorrhagiae, 17294
 toxic bacterial filtrates, 11526
 limb bud transplants, motor and sensory hyperplasia after, 13331
 limb primordium, development and innervation, 8047
 lung, development of air passages, 7984
 melanophores, origin, transplantation studies, 17047
 metabolism, of lactic and pyruvic acids in, 10982
 mineral, 8042
 minced, effect on bacterial virulence, 11558
 mullerian ducts, development, sex hormones as affecting, 17048
 nerve fibers, growth and differentiation in vitro, 8041
 neural crest, pigment production in, 9770
 origin of P compounds in, 5958
 pituitary body, development, 4377
 9762
 protein level and growth, 15111
 relative growth of leg bones, 4380
 respiration, comp. of gas in air space of egg and, 2116
 sex differentiation, synthetic hormone as affecting, 759
 sympathetic nerve ganglia and sheath cells, origin, 8036
 Chick pea. (See *Cicer*.)
 Chicken. (See *Domestic fowl*; *Egg(s)*.)
 poultry; *Gallus domesticus*; *Poultry*.
 For embryological material see *Chick*.)
 Chicken mite, control, 10421
 Chicken pest. (See *Fowl-plague*.)
 Chickenpox. (See *Varicella*.)
 Chicle. (See *Gum*.)
 Chicory. (See *Cichorium intybus*.)
 Chigger. (See also *Trombicula*.)
 of N. America, identity, 17979
 Childbirth. (See *Parturition*.)
 Children. (See also *Infants*.)
 absorption lines of cornea, etiology, 14868
 acid-base mineral balance, milk and, 11265
 acrocyanosis in, sleep and skin temp., 11263
 adiposogenital dystrophy in, treatment, 385
 allergic diseases in, 6088
 Al balance in, 9176
 anemias, cardiac size in, x-ray study, 16823
Ascaris eggs in mesentery, 1566
 asthma in, adrenal cortex as affecting, 13191
 13191
 infectious, by filtrates of respiratory tract pathogens, 13491
 atelectasis, allergy rôle, 17133
 atropine poisoning in, 16798
 basophilia, due to leaded water, 14995
 behavior, infections as affecting, 11272
 blood counts, standardization, 16822
 blood phosphatase in, 16439
 seasonal variations, 14872
 blood pressure in, 561
 blood vol. and extra-cellular fluid, 13192
 12643
 Ca in saliva, 5535
 carcinoma of liver, 11283
 centers of ossification from birth to 5 yrs., 8017
 cerebellar astrocytomas, anat.path., 16341
 cerebral vascular lesions, clin.path., 16321
 changes in types of visual refractive errors, 2340
 congenital universal insensitivity to pain, clinical report, 560
 convulsion in, review, 14633

Children (*continued*)
 Cu balance in, 310
 development of finger movements in, 3990
 of hypertension during rheumatic fever, 500, 501
 diabetic, dental caries, incidence of *Lactobacillus acidophilus* and, 15038
 insulin requirement, 11266
 digestive tract motility, carmine as affecting, 9262
 diphtheria immunization, carriers, and Schick testing, 7815
 equine encephalomyelitis virus recovered from, 13564
 erythrocyte sedimentation rate, 9138
 excretion of urinary androgens in, 9404
 fat absorption, giardiasis as affecting, 17920
 food consumption, 2008
 food requirements of S. Indian, 7402
 glucose tolerance test, factors affecting, 2341, 7820
 growth, bananas as affecting, 16824
 in stature and wt., 16825
 induction of premature puberty with testosterone, boys, 354
 laevuloseuria, liver extract as affecting, 9578
 leprosy, investigation center for study, 558
 maintenance of body temp., 505
 malaria in, Sierra Leone, 14185
 malnutrition, A. C. H. index and, 9580
 S. Africa, 11287
 mixed renal tumors, 413
 mongoloid, maternal age and, 15965
 mortality, malaria as affecting, Greece, war years and, 14174
 motility during sleep, 16711
 negro, healthy, *Pl. falciparum* in, 7809
 nephrosis in, acacia as affecting, 7819
 nutritional edema, Egypt, 2350
 obese, growth and development, 16819
 pericarditis in, vit. B and, 7724
 pharynx, anatomy, 8005
 physical exercises, syllabus, 9579
 pinworm incidence, 10458
 pneumonia in, 15345
 intramuscular serum therapy, evaluation, 4176
 measles-complicated, chemotherapy, 17255
 pre-school, Cu balance in, 11268
 Ca requirement of girls, 7456
 pseudo-sexual precocity, adrenal cortical hormone and, 5860
 relation of nail growth to nutrition, 16820
 renal rickets, treatment, 2342
 respiratory reflexes in, 14589
 response of digestive tract to pasteurized, evaporated and base-exchanged milks, 16568
 rheumatic disease in, familial tendency, 5795
 school, physical fitness, 11271
 stature of north European and Italian ancestry, 8026
 sulfanilamide therapy in, anemia due to, 2401
 infections, alone and with sero-therapy, 15198
 syphilis acquired in, 15344
 thyroid, deficiency, case, 562
 creatinuria in, I_2 as affecting, 14972
 serum phosphatase in, 14870
 disorders, creatinine excretion and, 16826
 transposition of learning by, 7619
 tuberculin sensitization in, 17134
 test with purified protein derivative, 16827
 tuberculosis in, basal metabolism variations, 14871
 effects of primary, 10009, 18193
 prophylaxis and therapy by vacuinal, 17148
 undulant fever skin tests in, statistics, 11649
 upper extremities, anthropometry, 17034
 vit. C in blood, Batavia, 328
 vit. C excretion test, rheumatic fever and, 2343
 vit. C storage, bananas in diet as affecting, 16825
 white vs. negro, helminths in, Louisiana, 6754
 hematoencephalic barrier in, 12648
 xerophthalmia in, breast feeding and, 2351

Chilenophilidae (Myriopoda), p.1873⁴
Chilonophilus (p.1873⁴), n. spp., 6831
 Chiliferidae (Protozoa), p.1868³
 Chills, effect on heat loss from nude body, 280
 Chillies. (See *Capsicum*).
Chilodon (p.1868³) *uncinatus*, evidence for promitosis, 1722
Chilomastix, in cecetomized chicks, 17909
 in exptl. enteritis, turkey poult, 6735
 intra-colonic heat therapy, 3240
 mesnili, incidence, 1547, 14162
 14176, 17905
Chilomonas paramecium, autotrophic metabolism not confirmed, 3256
 growth in cultures, substance controlling, 5103
 as influenced by V. Mn and Fe, 12643
 pyrimidines as affecting, 1582
 rate of reproduction, pH of culture medium as affecting, 177
 Chiloncyteridae (Mammalia), p.1882²
Chiloncyteris (p.1882²), new subsp., 12455
 Chilopoda (Myriopoda), p.1873⁴
 antenna musculature, 10577
 gregarine in, 6761
 gregarine N. from, 12288
 habitats in Central Europe, 12318
 phylogeny, changes in position of appendages in, 1694
Chiloscyllium (p.1879³) *griseum*, anat. reproduction, 3379
Chiloscyphus (p.1863³), spp. transferred from, 4752
Chimaphila, Mexican spp., 4778
 Chimera(s). (See also *Variation*).
 chromosomal, in *Solanum grueille*, 7097
 in *Chrysanthemum*, due to anastomosis, 2810
 Graham apple as, 13878
 Red Warba potato as, 17585
 in *Silene fimbriata*, 12528
 Chimpanzee. (See also under genera, e.g., *Pan*).
 adaptation to problems, 9450
 ascarids from, 15946
 blood groups, 4535, 13521, 13526
 bulbocephalic catatonias in, 14803
 cerebral cortex, structure, 4334
 coronary arteries, anatomy, 8012
 dermatoglyphics, comparison with man, 4371
 development of frontal sinuses in, 9717
 malaria, exptl. transmission, 12264
 observational learning of discrimination problems, 7612
 ovary, structure in pregnancy, 692
 sex behavior, 7059
 sex and reproductive cycles in, 10670
 thalamus, nuclear structure, 685
 Chinch bug. (See *Blissus leucopertus*).
 Chiniofon, in trichomoniasis (rat), 542
 Chinone. (See *Quinones*).
 Chinoplasmin, in malaria therapy, 1558
Chione (p.1872⁴), n. sp., 6828
Chionea (p.1877²), wing rudiments present, 6891
Chionodes (p.1877²), resurrected, 16040
 Chipmunk, climbing ability, 18105
 endemic typhus susceptibility, 2632
 note, 7038
 Chirocephalidae (Crustacea), p.1873⁴
Chirocephalus (p.1873⁴) *diaphanus*, egg membrane of, 1615
 stagnalis pentheri, descr., 16016
 Chironomidae (Diptera), p.1877²
Chironomus lugubris, in mosquito pool, 3202
 plumosus, pupae, mortality due to freezing, 10800
 thummi, experimental ecology, 6904
 Chiroptera (Mam.), p.1882². (See also *Bats*).
Chiropteris (p.1864⁴) *incisa*, (Pr), 15432
 Chitin, lysis by *Actinomyces*, 2774
 structure, micellar concept, 17689
 molecular, relation to spiral growth, *Phycomyces*, 15731
Chitinodendron franciscanum, Upper Cambrian, Wisconsin, 6771
 Chitosamine. (See *Glucosamine*).
 CHLAEOSCIADIUM (Dicot.) (p.1866³) *gardneri*, 1135
 Chlamydobacteriaceae (Bacteria), p.1861¹
 Chlamydobacteriales (Bacteria), p.1861¹
 Chlamydomontidae (Protozoa), p.1868³
Chlamydomonas eugametos, motility of cells, factors affecting, 6600
 and related spp. inheritance of sex, 79
 sexuality of gametes, u-v light as affecting, 10305

Chlamydotheca (p.1873²), distr. limits, 12920
Chlamys (p.1872³), n. sp., 6828
Chlania (p.1877²), n. sp., 6934
Chlidonias (p.1881³) *niger*, on Lower Thames, 14300
 Chloral hydrate, altitude as affecting action, 2290
 in anesthesia of lower animals, review, 1019
 citratd, anesthetic action, horse, 14834
 effect on:
 cerebral potentials, rabbit, 7656
 insulin action on body temp., 11241
 mitosis, *Vicia*, 10720
Chlorella, Ca and Mg as affecting, 12060
 growth and metabolism, alkali ions as affecting, 12058
 pyrenoidosa, respiration and photosynthesis, organic compounds that inhibit, 12109
 vulgaris, growth, as influenced by deuterium oxide, 1375
 Chloride(s). (See also specific chlorides, e.g., *Ammonium chloride*).
 absorption by anal papillae of *Diptera* larvae, 5432
 amt. in mollusc, 6824
 balance, in marine animals, 9152
 nitrates as affecting, 12643
 in blood. (See *Blood, chlorides*).
 body content, detn., 14516
 conc. in hemolymph, mosquito larvae, 3655
 detn. in biological fluids, 16368
 in blood, 9110
 distr. in C. N. S. and spinal fluid, 7391
 effect on edema of nephritis, 2134
 on liver metabolism, 5529
 intestinal absorption, yeast extracts as affecting, 12643
 liver min.-vol. uptake and output, 3766
 in milk, 13369
 from fasted cows, 13362
 in muscle extracellular fluid, frog, 253
 in tissue, electrodialysis, 12643
 in urine. (See under *Urine*).
 Chloridea (p.1877²) *obsolata*. (See also *Heliothis obsolata*).
 virescens, on cotton, 12198
Chloridella (p.1874⁴) *angolia* (K), 14233
 Chloridellidae (Crustacea), p.1874⁴
 Chlorination, of water. (See under *Water*).
 Chlorine. (See also *Chlorides*; *Hypochlorites*; and specific chlorine compounds).
 disinfectant action on molds, 17397
 effect on bacteria in water plus organic substances, 15324
 on *Trichomonas vaginalis* in culture, 12274
 radioactive, absorption rate, 3546
 toxicity, to plants, 3097
Chloris (Aves) (p.1882⁴) *chloris*, effect of light on sexual cycle, 11111
 chloris, bird banding, 14296
 bird banding and migration of, 8846
Chloris (Monocot.) *petraea*, *Dothichloe* on, 13732
 Chloroacetanilid, antipyretic activity, 14808
 Chlorobutanol, effect on convulsant action of thujone, rat, 7801
Chlorochroa sayi, damaging cotton, 10407
 Chlorococcaceae (Algae), p.1860¹
 Chlorocyclopropanes, anaesthetic action, 2306
 Chloroform, anesthesia, effect on alcohol oxidation, 16470
 of lower animals, review, 1019
 cirrhosis due to, rabbit, 2094
 distr. in organism, 5782
 effect on:
 chromosomes, *Tradescantia*, 1710
 heat center, 18073
 liver, foods as affecting, 9255
 xanthine protection against, 12643
Chlorogalum (p.1865³), n. sp., 4763
Chlorogonium (p.1860³), n. sp., 2789
 Chloroleucemia, preservation of cells in frozen state, mice, 573
 Chlorometacresol, toxicity, 14864
 Chloromonadales (Algae), p.1860³
 Chloromonadophyceae (Algae), p.1860³
 Chloronaphthalenes, effect on body, 11358
 Chlorophyceae (Algae), p.1860¹
 Chlorophyll. (See also *Chloroplasts*; *Photosynthesis*).
 in bitumen, origin, 14155
 chemistry, 17724, 17725
 17726, 17727, 17728
 condition in leaves, clover, 14007
 content of Wisconsin lake, 7226

- deficiency, in *Capsicum*, 8928
in *Silene chimera*, 12528
destruction in intestinal tract, 12911
effect on activity of gonadotropin, 9283
on erythropoiesis and Hb regeneration, 10910
in Euglenida, as character for classification, 5101
formation, in cambium cells, light as affecting, 1372
genetic basis, barley, 12525
in plantain, light as affecting, 4947
in stems and leaves humic compounds as affecting, 17619
isolation and extraction, improved method, 3093
metabolic fate, rat, 10911
in North Sea plankton, 12607
proto-, chemistry, 17729
in pumpkin seed, light as affecting, 12086
relation to chloroplast, 6596
to mineral metabolism, *Petunia*, 10315
to plastid, 6595
to seed size, sunflower seedlings, 1403
synthesis of vit. B₁ by, carrots, 15732
synthetic chromogen related to, 8577
variations, inheritance in sorghum, 4933
Chlorophyllan, sources, properties and prep., 6326
Chlorophytum (p.1865) *clatum*, vegetative reproduction, 1117
Chloropierin, as herbicide, for nutgrass, 10188
as soil and seed disinfectant, 3169
toxicity to *Cimex lectularius*, 10461
Chloropidae (Diptera), p.1877⁴
Chloroplast(s). (See also *Chlorophyll*; *Plastid*.)
chem. comp., 14010, 17730
disintegration, in American cotton vars. in India, 17798
isolation and study, *Spinacia oleracea*, 16150
structure, relation of chlorophyll to, 6595, 6596
Chlorosis. (See also *Chlorophyll*; *Variegation*.)
of citrus trees, ferrous citrate for, 8493
of cottonwood, control, 10379
of gardenia, soil temp. as affecting, 8621
iron conc. and, 8619
of peach, relation of Mg to, 15837
of rice, 17800
of Scotch pine, due to K and Mg deficiency, 1447
of sugar cane, suspected virosis, 17775
Chlorotettix (p.1875⁴) *aurum*, 1629
Choanephora (p.1861²) *cucurbitarum*, cow-pea pod spot due to, 17753
light as affecting growth and fruiting, 15442
Choanotaenia (p.1870⁴), as influenced by brilliant green therapy, 17279
iola, from robin, 12296
passerina *provis*, in English sparrows, 1593
Choerodosis rhombicollis, spermatogenesis, 61
Cholagogues, ferulic acid as, 4151
p-tolyl-methylcarbinol derivatives as, 4151
vanillin derivatives as, 4165
Cholamines, phosphoric acid esters, effect on blood pressure and intestine, 7761
Cholanic acid derivatives, pharm., 7743
effect on blood sugar, rabbit, 9569
Cholanthrene, carcinogenic activity, structure, 2355
effect on growth of induced tumors in mice and rats, 585
methyl-, effect on amphibia, 11284
Cholates. (See also *Bile*, *salts*; *Cholic acid*; *Taurocholates*.)
effect on bile salt, chloride and cholesterol in bile, 11034
in measurement of circulation time, 16750
Cholecystitis. (See also *Gallbladder*.)
chronic, relation to localization of *Salmonella* infection, 13606
post-operative chemotherapy, 4554
Cholecystokinin, effect on biliary and pancreatic papillae, rabbit, 13137
gall bladder tension and, 470
Choleglobin, formation from ascorbic acid and Hb, 16416
Choleic acid compounds, effect on tissue cultures, 16846
Cholelithiasis. (See *Calculi*.)
Cholenic acid, isodihydroxy-, ultraviolet as affecting, 12690
Cholera. (See also *Vibrio comma*.)
bacteriophagy, culture medium for, 2629
epidemiology and epidemiography, in Russia, 11698
fowl. (See *Pasteurella avicida*.)
hog. (See *Hog cholera*; *Salmonella choleraesuis*.)
pathogenesis of exp., 17317
saline injections in, man, 7740
serodiagnosis, vibrio somatic antigen and antibody value in, 6095
vaccine, production, 2629
Cholestan, 3,6-diamino-, pharm., 7805
Cholestanonesulfonic acid, pharm., 7805
Cholestenone sulfonic acid, pharm., 4118
Cholestenonesulphonate, effect on tissue growth, benzpyrene and, 7851
solubility of 3-4 benzpyrene and, effect on tumors, and toxicity, 7834
..... 7851
Cholesterol. (See also *Lipids*.)
acetate, effect on cardiac action of acetylcholine, 4173
in adrenals, human fetuses, 9425
antilytic factor in carcinoma, 4181
in blood. (See under *Blood*.)
detn., 7304, 9131
in blood, 3645, 7335, 16335
micro-, 1937, 16363
effect on:
adrenals, 9314
arteries in sympathectomized rabbits, 7712
blood picture and organs, guinea pigs, 13263
distr. of unsaponifiable substances in body, 13163
streptococcal hemolysins, 17150
tumor production, rats, 16835
in erythrocytes, 4243
esters, detn., in tissues, 1937
effect on lipids of cancer cells by normal sera, vs. cholesterol butyrate, 7825, 7826
in etiology of cancer, radioactivity and, 13209
and fat, in exptl. arterial lesions, 16727
feeding, effect on blood cholesterol after thyroidectomy, 14635
in fixed organs, 5917
as growth factor for *Trichomonadinae*, 14166
heated, photoactivity and, 9595
irradiated, distillation products, 13224
photoelectrical effects, 9594, 9595
in malignant tumors, 13210
metabolism, choline as affecting arteriosclerosis and, 489, 499
relation to degenerative diseases, 11305
source of estrogens during pregnancy, man, 3879
partition study, in degeneration of liver, 16909
phenanthrene derivatives, in carcinogenesis, rats, 13197, 13223
in production of xanthoma in rabbits, 14905
progesterone prepared from, 12993
pro-vitamin D formed from, 5579
in skin, u. v. and colored filters as affecting, 3571
solubility in gall-stone solvents, 12643
in tissues, effect on bacterial intoxication, 13405
toxin inactivation by, 819
in transplanted Jensen sarcoma, 4209
Cholesteryl-oleate, u. v. as affecting, 11302
Cholic acid. (See also *Bile*, *acids*; *Cholates*; *Taurocholates*.)
anthropodesoxy-, separation from swine bile, 9257
in bile, ape, 12902
diet as affecting, fox, 12895
rabbit, 12891
sea-bear, 12903
conversion of 3-keto-7,12-dioxycholic acid to, toad, 12788
dehydro-, diketocholanic acid synthesized by *Proteus* from, 10087
and desoxy-, fate in body, 16923
desoxy-, benzaldehyde reaction, 16570
detn., 9129
detn., 16362, 16372
effect on:
blood sugar, 12756
creatin-creatinin output, 13021
deamination of alanine, rat kidney, 9192
guanylic acid deamination by kidney tissue, 13022
lipase action, 12892
liver glycogen in fasting rabbits, 9198
elimination, 7512
in health, 3758
in jaundice, and use as liver function test, 3759
in liver disease, 9258
hydrosesoxy-, effect on pancreatic lipase and red blood cells, 13164
12 keto-3, fate in body, 16495
of vit. K, effect on prothrombin of blood in bile fistula rats, 14568
Choline. (See also *Acetylcholine*.)
acetyl- β -methyl. (See *Mecholyl*.)
in bile, 12643, 12899
carbaminoyl-, leucopoietic action, 11213
in cecum of dog and rabbit, 12914
deficiency in diet, rat, 12817
derivatives, effect on bronchi, 5735
lipotropic properties, 10988
as a dietary factor, 14440
effect on:
cholesterol metabolism and arteriosclerosis, 489, 499
growth of pneumococcus vs. streptococcus, 13627
ketonuria, 7560
kidney lesions, rat, 12777
pernicious anemia, 4248
phospholipid metabolism in liver, 7448
polycythemia, 9542, 12643, 14802
refractory phase of heart, 4126
lipolytic action, liver phosphatid during, 5587
in liver, *Gadus*, 261
reactions, of white rats, 9896
Choleopus hoffmanni, body-temp. regulation in, 5214
Cholylcystic acid, synthesis, 5538
Chondria riparia, economic value, Burma, 3048
Chondrilla juncea, as weed, control, 1180
Chondriocents, chondriome, chondriosomes. (See *Mitochondria*.)
Chondrocranium. (See also *Head*; *Skull*.)
anatomy in *Xenopus*, 11379
Chondrodendron limacifolium, alkaloids of, 4903
Chondroitin, effect on gizzard erosion, chicks, 2691
growth factor study, 12643
Chondroitin sulfuric acid, effect on gizzard erosion and growth, chick, 3705
on growth, tadpole, 7462
on growth and dermatitis, chick, 7464
prep., 16346
Chondrosamine, note, 16345
Chondrostei (Pisces), p.1879¹
Chonetidae (Brachiopoda), p.1871²
Choniognathus (p.1874⁴), tax., 1616
Chonophyllum (p.1869⁴), n. sp., (D), 10335
Chorda dorsalis. (See *Notochord*.)
Chorda tympani nerve. (See under *Nerves*.)
Chorda (p.1860⁴) *filum*, gametophytes, 8374
Chordata, evolution of gall bladder in, 3752
Chordotomy. (See *Spinal cord*, *section*.)
Chorea, as influenced by tonsillectomy, statistical study, 617
Choriomeningitis, lymphocytic, and canine distemper viruses associated, 2612
complement fixation in infections with virus, 4511
diagnosis and case study, 6162
effect on exp. poliomyelitis, 17284
epidemiology and endemicity in stock mice, 11624
path., 9666
soluble antigen, separation from virus, 13485
virus, neutralization by human sera, 15166
particle size detn. by ultrafiltration and ultracentrifugation, 15246
poliomyelitis "sparing effect", 2612
preservation by freezing and drying in vacuo, 15253
Choroid. (See under *Eye*.)
Choroid plexus. (See also *Blood vessels*.)
extract, specific factor increasing tissue permeability, 16294
fetal, onset of secretion in, 1964, 1990
interstitial granular cells, in psychotics, 5868
Chorology. (See *Phytogeography*; *Zoogeography*.)
CHORTINASPIS (Hom.) (p.1875⁴), 10605

Chortoicetes (p.1875²) *terminifera*, parasitized by *Scelio fulgidus*,15929
Chortophaga (p.1875²) *viridifasciata*, mitotic behavior of chromosome fragments without spindle fiber attachments,8912
 x-ray-induced changes in chromosomes,56
Chromesius (p.1876³), revision and n. spp.,10590
 Chromaffin tissue. (See also *Adrenal gland*; *Nervous system, sympathetic*.)
 cells, nature in certain annulates and arthropods,5970
 Chromatin. (See *Chromosomes*; *Meiosis*; *Mitosis*; *Nucleolus*; *Nucleus*.)
 Chromatophore(s). (See *Pigment cells*; for plant and protist material see *Chloroplast*; *Plastid*.)
 Chromides (Pisces), p.1880²
 Chromium, effect on succinate oxidation by cytochrome C,7267
Chromobacterium (p.1861¹) iodinum, from milk,17450
 Chromogen(s). (See also *Pigments*.)
 synthetic, related to chlorophyll,8577
 Chromomere. (See *Chromosome(s)*; *Meiosis*; *Mitosis*.)
 Chromonema(ta). (See *Chromosome(s)*; *Meiosis*; *Mitosis*.)
 Chromoplast(s). (See *Chloroplast*; *Plastid*; for metazoan material, see *Pigment cells*.)
 Chromosome(s). (See also *Meiosis*; *Mitosis*; *Nucleolus*; *Nucleus*.)
 of aneuploid *Scolopendrium* sporophyte,5306
 attached, genetic and cytol. proof,7158
Bombyx,1726
 attached-X, origin, *Drosophila*,5292
 in *Avena* hybrids,41
 in *Begoniaceae*,1704
 behavior, in asynaptic *Pisum sativum*,8918
 in atypical spermatogenesis, *Viviparidae*,7093
 in diploids and triploids, *Lilium tigrinum*,5298
 in oogenesis, *Neuroterus baccarum*,14350
 in *Sciara*, review,5285
 behavior and form, in tetraploid *Aconitum*,7099
 in *Triticum*, *Crepis*,40
 catenations, *Oenothera*,5334
 changes, frequency in relation to x-ray dosage, *Drosophila*,56
 x-ray-induced, *Chortophaga*,87, 16163
Drosophila,51
Oecanthus,1696
 chemistry, review,5380
 chiasmata, *Oenothera* hybrids,5380
 chimeras. (See *Chimera(s)*, *chromosomal*.)
 chromatid behavior after breakage at meiotic anaphase, *Zea*,10717
 chromonema, in mitosis, *Tradescantia*,1706
 uncoiling by alkaline treatment,16155
 coiling, in *Allium*, *Tradescantia*, *Vicia*,1702
 in *Hyacinth*,1709
 comparative study, *Tubellaria*,5300
 crossing-over. (See also *Crossing over*.)
 between semihomologous, *Triticum-Haynaldia* hybrids,1718
 cycle, in *Rhabdias fülleborni*,75
 deletion and translocation, relation to mosaic formation, maize,1714
 diakinesis, major spirals in, *Trillium*,3447
 differential stain for nucleolus and,12536
 doubling number by heat, in *Triticum* hybrids,8911
 elimination, in germ cells, *Sciara*,9780
 and endosperm development, in backcrosses of *Triticum* hybrids,7130
 euploid alterations, heritable variations conditioned by,16174
 evidence for Neo-2-plane theory of bivalent constitution, *Trillium*,1708
 fragments without spindle attachment, behavior in mitosis, *Chortophaga*,8912
 of heat induced polyploid, Alfalfa,5312
 idio-, of *Lygaeus equestris*, *Eremocoris erraticus*,14353
 inert regions in auto-, *Drosophila*,8914
 as influenced by:
 acenaphthene, *Triticum*, *Avena*, *Crepis*,16154, 16159
 ammonia fumes, *Tradescantia*,7108

Chromosome (continued)
 as influenced by (continued)
 butyl alcohol fumes, *Tradescantia*,1711
 chloroform and ether fumes,1710
Tradescantia,7102, 16154
 colchicine,13209
 non-actinic light, cancer and,12698
 x-ray during mitosis,12501
 x-rays and cold, *Antirrhinum majus*,93
 inversions, cytogenetic analysis, *Drosophila*,1736
 interrelation with heterosis and recombinations,5294
 of *Lactuca* hybrids,1713
 lecithin as a constituent,8020
 of man, review,8916
 in *Mesostoma ehrenbergii*,8948
 in Mexican and Guatemalan populations of *Drosophila*,16181
 morphology, cotton,1749
 mutation. (See *Mutations*.)
 of non-amphidiploid derivatives of wheat-rye hybrids,7122
 non-homologous, association in *Corixidae*,1731
 in *Sigara*, *Corixa*, *Cymatia*,5295
 nucleolus-, in *Pallavicinia lyelli*,6428
 number. (See also *Cytotaxonomy*; *Meiosis*; *Oogenesis*; *Polyploidy*; *Spermatogenesis*; *Sporogenesis*.)
 in *Alopecurus*,1720
 in *Ambystoma tigrinum*,4808
 in *Artemisia* (Dicot.),16158
 in *Aster* (Dicot.),1715
 in British flowering plants,6448
 in *Canidae*,1134
 in *Carex* (Monocot.),12502
 in *Chrysanthemum*,3448
 in *Coffea*, stomata and,4777
 colchicine as affecting,5307
 from crosses of aposporous type of *Scolopendrium vulgare*,7106
 in *Cyperaceae*,17563
 in *Cyperaceae* and *Juncaceae*,5105
 in *Diantamoeba*,6328
 in *Eisenia* (alga),13725
 in *Enteromorpha* (alga),15518
 in *Erythronium*,7105
 in higher plants,6799
 in *Krumbachia* (Tubellaria),13760
 in *Lesquerella* (Dicot.),6822
 in *Limacina* gastropod,1701
 in *Mentha*,5289
 in *Neurospora crassa*,49
 in nodules and roots, *Pisum*, *Vicia*,13727
 in *Trifolium*,1717
 in *Perispermium*,13722
 in *Peromyscus*,1717
 in *Plumaria* (Red Alga),8920
 in *Poëphagus grunniens*,3398
 in *Rana* (frog),12506
 in *Salicornia*, plant habit and,17510
 in *Salvinia*,4741
 in *Sebacina*,6440, 10163
 in *Sequoia* (tree),1703
 in *Setaria*, *Panicum*,4805
 in *Styrax* (Dicot.),10712
 in *Taraxacum*,11912
 in *Urginea* (Angiosperm),2907
 in *Utricularia* (Dicot.),16165
 in yak,8910
 number and behavior, in apple and pear,44
 in basidium, *Russula*, *Lactarius*,5288
 in *Crocus*,1719
 in *Dasyurus viverrinus*,7104
 in macrosporangiosis, *Lilium*,1700
 in *Malvaceae*,16153
 in *Prunus*,1697
 in *Salvia*,16162
 in spermatogenesis, *Schizococca*,16162
 number and form, in *Hyla*, *Acris*,10722
 in *Oryzae*, *Phalarideae*, taxonomic significance,5290
 in *Passer*,10723
 in *Populus* spp. and hybrids,5291
 in *Ranunculus*, size and,5286
 number, form, and behavior, in *Cicer*,12505
Crepis hybrids,63
 in *Paris*,7095
 in pig,16161
 in *Oenothera* hybrid,16170
 pachytene, structure, in *Lilium*,14346
 pairing and sterility, in intraspecific hybrids, *Galeopsis*,12507
 phylogeny,8903
 physico-chemical nature,3444, 14344
 and polyploidy, in *Tulipa* spp.,16190
 polytene, origin, in *Diptera*,8913
 pro-, in *Polanisia* and *Gynandropsis*,3449
 in progeny of haploid *Triticum*,12509

Chromosome (continued)
 prophase, behavior in cells with multiple complexes, *Culicidae*,58
 in *Rana* hybrids,58
 relation to nucleolus, *Trillium*,1707
 relationships in *Leguminosae*,3450
 salivary, ash pattern, *Drosophila*,1695
 comparison of *Drosophila* spp.,7142
 correspondence and linkage maps,7112
Drosophila,5297
 crossing over in, *Drosophila*,7138
 duplication causing hairy wings,14351
Drosophila,7118
 structure, *Drosophila algonquin*,3d
 x-ray-induced reverse repeat in 3d,7118
Drosophila,12508
 satellites, length, *Aloe*, *Cyclanthera*,61
 sex, in *Chocradodis*,47
 in *Conocephalus*, *Frullania*,10716, 16191
 in *Melandrium*,7117
 nature, in *Ascaris*,1724
 relation to nucleolus, *Bombyx*,4386
 and sex hormones in relation to sex detn.,12517
 in *Solanum* hybrids,10718
 somatic, complements in grasses,8904
 crossing over and translocations, discussion,3452
 multiplication and reduction, *Culex pipiens*,7096
 variation in number, *Triticum* hybrids,43
 spermatogenesis, *Spilocryptus extrematus*,16164
 structure, in *Ambystoma punctatum*,5296
 geneticist's view,14343
 review,7069
 structure and variation, in *Drosophila*,5335
 studies, Angiospermae of Schleswig-Holstein,50
 on natural populations, *Paris quadrifolia*,5287
 supernumerary, in *Gryllotalpa africana*,7119
 synopsis. (See *Meiosis*.)
 and taxonomy, of *Calochortus*,8906
 translocations, somatic and somatic crossing over, *Drosophila*,42
 in wheat-rye hybrid,12554
 X, crossing over and heterochromatin in, *Drosophila*,7148
 inversion, effect on non-disjunction, *Drosophila virilis*,7121
 Y, absence in *Microtus*, *Apodemus* and *Eutamias*,8992
 1, zygotic lethal in, maize,7151
 2, crossing over increased in, *Drosophila*,12555
 3, closely linked dominant mutations in, *Drosophila*,8924
 8, translocations involving, maize,7133
 10, factors in, Maize,1860³
 Chromulinaceae (Algae), p.1860³
 Chronaxie. (See also *Heart*; *Muscle*; *Nerve*.)
 of isolated uterine horn, guinea pig,14751
 physiologic applications, book,16717
 Chronograph. (See *Time, recorders*.)
 Chronoscope, new type,7323
 voice relay for use with,14488
 Chroococcaceae (Algae), p.1860¹
Chroococcus (p.1860³), n. sp.,8385
 CHRYSAEINE (Fungi),1074, 17487
Chrysaliocarpus (p.1864⁴) *lucubensis*, in Americas,11861
Chrysanthemum, breeding,4871
 greenhouse culture, with gravel and sub-irrigation,11981
 injury by gall-making fly, control, Gr. Britain,12193
 as insecticide. (See *Purethrum*.)
 monocarboxylic acid esters, as insecticides,6711
Chrysanthemum (p.1867⁴), chromosome no. and ligulate flower no.,1134
 flaked flowers, due to unstable genes,74
 mutation in,8499
 balsamita *tanacetoides*, culture and structure, and chemistry of oil, 4909
 cinerariacefolium, growth and pyrethrin yield, fertilizer as affecting,6474
 indicum, photoperiodism,3082
Chrysaora (p.1869³) *isoseles*, nervous system, histology,17066
Chrysomys (p.1880³) *belli*, indigenous to Brit. Columbia,3402
 Chrysene, carcinogenic effects, mice,11295

Chrysidoidea (Hymenoptera), p.1878⁴
Chrysobothris femorata, insecticides and repellants for,10391
Chrysocloridae (Mammalia), p.1882¹
Chrysococcus (p.1860³), n. spp., in Ohio,2792
Chrysocyclus (p.1862²), from Venezuela,6345
Chrysomelidae (Coleoptera), p.1876³
Chrysomeladales (Algae), p.1860⁸
Chrysomonadida (Protozoa), p.1868¹
Chrysomphalus (p.1875⁴), n. sp.,10605
 anidum, as affected by spray residue, population of,5019
 obscurus, on pecan, control,5020
Chrysomyia (p.1878¹) *megacephala*, eggs of, number laid,8201
Chrysomyxa (p.1862²) *ledi*, shortened life cycle in Finland,8396
Chrysophanus (p.1876⁴), n. race,8787
Chrysophyceae (Algae), p.1860⁸
Chrysopidae (Neuroptera), p.1875¹
 predator, on aphid, Ont.,10451
Chrysops (p.1877³), new spp.,1624
Chrysopsis hyssopifolia, note,15494
Chrysosoma (p.1877⁴), n. spp.,14256
† *Chrysotemis* (p.1877⁴), tax.,6945
Chthamalidae (Crustacea), p.1873⁸
Chthamalus (p.1873⁸) *stellatus*, biology,10796
 stellatus, variability,10572
Chuckawalla, tumors, *Bacterium sauro mali* causing,11728
Chydoridae (Crustacea), p.1873¹
Chytridiaceae (Fungi), p.1861²
Chytridiales (Fungi), p.1861²
 from Michigan,13787
Chytridium (p.1861²) *confervae*, from N. America,13787
 oedogoni,15444
Chytrids, collection, isolation, culture,15445
Cibolocrinus (p.1871²), (Cb) n. spp.,10555
Cicada, periodical, as pest of cotton,15902
 of Virginia and West Virginia, biology,1628
Cicadella (p.1875⁴), new spp. from Australia,18016
Cicadellidae (Hom.), p.1875⁴. (See also *Leafhoppers*.)
Cicadidae (Homoptera), p.1875⁴
Cicadula sex-notata. (See *Macrosteles divinus*.)
Cicatrix. (See *Wounds*.)
Cicer (p.1865⁴), meiosis and mitosis,12505
 arietinum, as source of commercial starch,11953
Cichlasoma (p.1880⁶) *vombergi*, from Santo Domingo,6961
Cichlidae (Pisces), p.1880⁶
Cichorium. (See also *Cichory*; *Endive*.)
 intybus, photoxan content,17669
Cicindela (p.1876³), n. spp.,8883, 12346
Cicindelidae (Coleoptera), p.1876³
Cicinnurus (p.1881¹) *regius*, breeding in,7022
Ciconiidae. (See also *Storks*.)
Ciconiiformes (Aves), p.1881¹
Cider, apple, flash pasteurization,1032
 apples and pears for, culture and production statistics, France, 1278
 sweet, pasteurization,1020
Cigarette smoking, effects,549
 on gastric juice in duodenal ulcer cases,12909
Ciliary body. (See under *Eye*.)
Ciliata (Protozoa), p.1868⁸
 acclimatization to osmotic pressures of media,7253
 endoparasitic, in intestine, earthworm,10514
 immunol. relations, of *Glaucoma-Colpidium* group,8172, 8173
Cilium(a). (See also *Flagellum*.)
 frequency of beat, hydrostatic pressure as affecting, *Mytilus*,14750
Cimex (p.1875²) *lectularius*, fertilization and egg production,18012
 fumigation expts.,10461
 laboratory rearing of,5062
 physiology of activity in,18013
Cimicidae (Hemiptera), p.1875⁸
Cimicifuga racemosa, embryo development,4809
Cinchona, alkaloids. (See also *Quinidine*; *Quinine*.)
 addition compounds with sulfanilamide, chemotherap. value,13552
 detn.,1313, 9115
Cinchona, alkaloids in bark, extraction and determination,1313
 test for,1346

Cinchophen, effect on biliary secretion, dog,14856
 on kidneys, unilateral renal denervation as affecting,9399
 toxicity,16771
Cinematography. (See *Motion pictures*; *Photography*.)
Cinnamomum (p.1865³), n. spp.,11876
 of *Oligocene*,4724
 camphora, fats from, chemistry, 12045
Cintractia (p.1862²), n. comb.,2800
Ciona (p.1878³), self fertilization induced by various agents,4389, 4390
Circulaspis (p.1875⁴), n. sp.,10605
Circulation. (See also *Blood*; *Blood pressure*; *Blood vessels*; *Circulatory system*; *Heart*; *Lymph*; *Lymphatics*; *Pulse*; *Reflexes*, cardiovascular.)
 age and,2264
 aortic, hypertension and,5711
 arterial vs. venous thoracic, detn.,11185
 ballistocardiograph study,12643
 capillary structure and,7943
 cerebral, benzedrine as affecting,548
 chemical control, carotid sinus and,9519
 collateral, in coronary occlusion,12643, 14760
 in constrictive pericarditis, therapy,7730
 coronary, direct measurement,12643
 electrocardiography in anoxemia and,4083
 in failing hearts,5728
 as influenced by:
 acids and CO₂,14787
 anoxia, dog,12643
 coramine,9572
 coronary sinus ligation,485
 digitalis, dog,4066
 drugs,12643
 epinephrine,5717
 exercise, dog,7711
 myocardial ischemia,11182
 occlusion of coronary vein,486
 right intraventricular pressure conditions,12643
 strophanthin,5777
 phasic blood flow,16390
 disturbances, chronaximetric study in,4019
 of erect posture,12643
 during muscle contraction,7677
 dynamics in hypertension,504
 effect on cerebrospinal pressure,7705
 on disease resistance,6070
 equilibrium, cardiodynamic studies,4067
 extra vagal component in carotid sinus reflex,505
 failure, stimulant amines in,11259
 in fatigue,474
 fluid injection, apparatus for,12643
 to head and arms in syncopal attacks,4062
 hyper-, voluntary,14770
 as influenced by:
 drugs,9553, 9575
 environment,12643
 epinephrin, intact leg of cat,12643
 heat,2265, 13102
 hemorrhage and other factors,12643
 hydroxyphenylisopropylamines,16782
 potassium excess,12643
 pregnancy, man,3962
 pressor drugs,4142
 spinal anesthesia,9531
 tetramethylammonium compounds,5745
 veritol,555
 intramuscular during work,11151
 minute volume. (See *Heart, output*.)
 in mitral stenosis, study,4058
 pancreatic secretion and,9344
 in parietal cortex, vasodilator innervation and, cat,4063
 in perfused organs,12643
 peripheral body heat loss and,281
 in development of osteoarthritis,5836
 in diabetes, study,13101
 as influenced by:
 carbon dioxide,16747
 gas inhalation,4065
 heat and drugs,5722
 posture,16740
 temp.,4056, 11202
 in lower extremity, man,12643
 nervous control, adrenalin and,16732
 plethysmographic studies, 7700, 7701
 review,7244
 after venous occlusion,11205

Circulation (continued)
 pulmonary factors affecting,11047
 in perfused lung,3775
 in pupal wings of *Ephesia*,4401
 rate. (See *Heart, output*.)
 renal, adventitious, omentopexy in establishment,7569
 reactive hyperemia in,13026
 in retinal artery, study,13131
 in retinal capillaries, study,14753
 in skin capillaries,477
 in spleen,12643
 measurement,13113, 13114
 splenic rhythm and,12643
 stasis, in cardiac patients,16487
 study by Valsalva expt.,13185
 time, in diagnosis of paroxysmal dyspnea,14771
 measurement, Ca gluconate in,16750
 CO₂ inhalation in,13115
 magnesium sulfate in,5710
 posture as affecting,7719
 vascular vol. and, in dog's hind limb,16734
 velocity flow, detn.,223
 constant pressure flow meter for,12643
 factors affecting,9528
 with lobeline, man,7789
 of small flows of pulsatile streams, meter for,12643
 volume flow in foot, detn.,242
 hemorrhage and transfusion as affecting,9529
Circulatory system. (See also *Blood*; *Blood pressure*; *Blood vessels*; *Circulation*; *Heart*; *Lymph system*; *Lymphatics*; etc.)
 arterial, dynamics,9534
 arthropodan, physiology,16738
 changes, as cause of mental disease,2415
 in homophasic cerebrospinal demyelinating periangiosis, 16948
 diseases, climatic and socio-economic factors in,995
 effect on circulatory adaptation to acute anoxia,2423
 in general practise,7710
 syphilis therapy and,11204
 disorders, adult mortality, statistics,13640
 of ♀ fetal finback,675
 as influenced by:
 acetylcholine and ergotamine, 13178
 benzedrine,7753, 11243, 13146
 diamincholestan,7805
 drugs,13178
 insulin shock,9526
 intravenous dextrose and sucrose,11174
 Mg salts,7766, 12643
 metrazol,7765
 muscular exercise,14778
 occlusion of head arteries,12643
 pilocarpine,13178
 radioactive isotopes,4116
 rubiazol,13168
 therapeutic fever,12688
 vit. D₂ excess, dog,2083
 invasion by tumors,9589
 in myxedema, path.,16985
 peripheral, collapse in schizophrenia,16948
 disease and therapy,16741
 estrin as affecting,12643
 resistance, effect on pulse vol. and pressure,12643
 and renal disease, in non-diabetic glycosuria,7899
 symptoms, in beriberi,13267
 syphilis of, necropsy survey,11208
 thrombosis and path. processes,16880
Circus (p.1881²) *cyaneus*, breeding in England,14292
Cirphis (p.1877³), ♂ genitalia,16042
unipuncta. (See also *Armyworm*.)
 control, poisoned baits,10465
Cirratulidae (Annelida), p.1871¹
Cirratulus (p.1871²), syn.,17962
Cirrhosis, alcoholic, progressive,14577
 biliary, discussion,14575
 blood changes after withdrawal of ascitic fluid in,7336
 due to CCl₄, pig.,14586
 to chloroform, and effect of concomitant syphilitic infection, rabbit,2094
 to silica, dogs,9614
 hydatid disease in,10482
 hyperpolypeptidemia in,7344
 prevention by xanthine preps.,7509
 relation to primary hepatic carcinoma,14898

- Cirrhosis (*continued*)
 study by means of "marsupialized"
 spleen, 5586
 tyramine detn., prognostic value, .352
 Cirripedia (Crus.), p.1878². (See
Barnacles.)
Cirsium (p.1867⁴), tax., 17528, 17539
Cis (p.1876³), n. spp., 8780
CISANTHELIBUS (Col.) (p.1876³), geo-
 type *convexus*, 8781
Cisidae (Coleoptera), p.1876³
Cissampelos (p.1865⁸), n. sp., 2861
CISSANTHONOMUS (Col.) (p.1876³)
tuberculipennis, 8769
Cissus (p.1866²), n. spp., 2828A, 15483
Cistaceae (Dicotyledones), p.1866²
Cisternae. (See *Cerebrospinal fluid*;
Meninges.)
Cisticola (p.1882³) *exilis*, habits, ... 5170
Citellinema (p.1870³), tax., 17951
CITELLINOIDES (Nemathelminthes)
 (p.1870³) *zapodis*, from jumping
 mouse, 17952
Citellus (p.1882³), new fleas from, .18035
beecheyi fisher, attacked by gopher
 snake, 7038
columbianus, *Citellinema* from, ... 17951
elegans aureus, 10659
townsendii, descr., range, ecology, etc.
 of subspp., 12445
tridecemlineatus, fetal membranes, 4381
 hibernation, endocrines as affecting,
 14621
Citharina (p.1868²) † (gen. type—*Vaginula*
siriaticula), (K), n. spp., 15978
CITHARINELLA (Prot.) (p.1868²),
karrieri, 15978
 Citral, effect on carcinoma, mice, 5801
 Citrate(s), effect on liver metabolism,
 5529
 on pupil, 14847
 in sedimentation rate detn., 1993
 Citric acid, antiketogenic and glycolytic
 activity, 12643
 in birch and maple sap, 1395
 diacetyl from, in butter, 8084
 enzymic transformation to iso-citric
 acid, 12671
 fermentation by anaerobic bacteria,
 13671
 formation, in animal organism, 7571
 by molds from sugar, mechanism,
 11766
 by yeasts from acetic acid, 13676
 in ocular tissues, 16354
 oxidation by coli-aerogenes bacteria,
 11760
 rôle in acid metabolism, *Crassulaceae*,
 8582
 salts, as calcifying agents, rat., 10945
 Citrin, effect on capillary resistance,
 guinea pig, 16535
Citriobatus multiflorus, *Nyssopora* on, 8407
Citrobacter, citric acid oxidation by spp.,
 11760
 Citrullin, rôle in urea synthesis in body,
 13016
 test for, 16339
Citrullus (p.1867³) *vulgaris*, cell size and
 fruit size correlations, 10171
 in Egypt, vars. and subspp., 17629
 Citrus. (See also *Grapefruit*; *Lemon*; *Lime*;
Orange; and under the genus
Citrus.)
 control of *Paratetranychus citri* on,
 14106
 culture in Ceylon, irrigation practices,
 13887
 CN fumigation for scale control,
 S. Africa, 17860
 deficiency diseases, symptoms, 8618
 fertilizers as affecting *Azotobacter* and
 nitrification in soils under, 17442
 fruits, nematodes associated with decay
 in, 15995
 solids in, distr. and seasonal changes
 related to hardness, 15584
 use and culture, history, 10695
 water damage to, 1482
 green manures for, effect on trees and
 soil, 8010
 insect pests, new, Argentina, 17859
 removal of weevil egg masses, 14108
 southeastern U. S. A., 5021
 insecticide, dimetho-o-cyclohexylphenol
 as, 14105
 thiocyanates as, 5070
 mites on, control by Se spray, 3176
 oil spraying, as affecting plant, 10475
 orange tortrix on, control, 15894
 damage in Calif., 3172, 8634
 psorosis (virus), lesions on *Quercus*
 resembling, 17802
 origin and dist. in California, 1487
 symptoms compared with other virus-
 like diseases, 3169
 root and crown rots (*Phytophthora*),
 isolation technic, 6630
Saissetia on, California, 15898
 scale, serodiagnostics, 1482
 tissue, HCN detn. in, 14103
 tree, chlorosis, ferrous citrate as
 remedy, 8493
 culture, pH as affecting, 15595
 irrigating small, tool for, 15612
 vit. A in dried pulp, 8068
Citrus (p.1866³). (See also under *Citrus*
 just preceding; also *Grapefruit*;
Lemon; *Lime*; *Orange*.)
 brown rot, control, 15872
 canker (*Bacterium citri*), control in
 Ceylon, 8628
 composition and pH, as influenced by
 rootstocks, 1244
 culture, vars., and pests, 6521
 deficiency diseases, 14071
 frost damage in orchards, protection
 against, 1265
 gummosis, effectiveness of bark-
 scraping as control, 15378
 history of research in, 2929
 hybridization, 85
 hybridizing and propagation, 17638
 infectious variegation, 17777
 as influenced by B., 1256
 irrigation, machinery for, 1270
 melanose (*Phomopsis*), control, 12155
 nucellar embryony and clonal char-
 acteristics, 1745, 1747
 nursery blight, due to *Phytophthora*,
 1482
 psorosis (virus), certification of dis-
 ease-free stock, 15870, 17833
 control, 15839
 effectiveness of bark-scraping as
 control, 15878
 symptoms, 1482
 rootrot, due to *Fusarium* sp., 1482
 scaly bark (virus?), selection of
 propagating stock, 15869
 tax., 4783, 13761
 vars. and culture, 4877
 windbreak for orchards, *Eucalyptus*
 trees as, 15616
hystrix, host of *Bacterium citri*, 8628
Citrus red mite (*Paratetranychus*), control,
 5016
Citrus scale insect, population, spray
 residue as affecting, 5019
Citrus weevil, collection of egg masses,
 14108
Citrus whitefly, control, 14145
Cittotaenia (p.1870³), life history, 17936
pectinata americana, in varying hare,
 1564
 Civilization, exophthalmic goiter and,
 4289
Cladium (p.1864⁴) *ouveanum*, 8428
Cladocera (Crustacea), p.1873¹
Cladochytriaceae (Fungi), p.1861²
Cladochytrium replicatum, culture, 17488
Cladonia (p.1862²), in Maine and Quebec,
 4747
 in Massachusetts, 4746
 notes on Kentucky spp., 4744
 species in New Jersey, 6366
graciliformis in Alaska, 6363
Cladoniaceae (Fungi), p.1862²
Cladophora (p.1860²), chytrids on, 13737
 new epiphytic algae on, 6331
 contexta, 2793
Cladophoraceae (Algae), p.1860²
Cladosporium (p.1863³), n. spp., 17500
effusum, on pecan, control, 3145
fulvum, allergy to, specificity, 6091
 on tomato, resistant var., 3169
 herbarum, epidermomyces associated
 with fungus resembling, 13619
Cladotaenia (p.1870³), n. spp., 15987
 Clam(s). (See also *Mussels*; *Shellfish*.)
 in food poisoning, 11687
 production, sanitary analysis of water,
 996
Claoxylon (p.1866³), n. sp., 13768
Clarias (p.1879³), tax., 8809
 Clarification, of leaf extracts, method,
 3100
Clariidae (Pisces), p.1879³
 Clark, B. Preston, biography, 8892
Clasmatoctes(s). (See under *Reticulo-*
endothelial system.)
 Classification. (See *Taxonomy*.)
Clathrospora (p.1861³), n. sp., 15453
Clausiliidae (Crustacea), p.1878²
Clausiliidae (Mollusca), p.1872²
Clavaria (p.1862³), Australian spp., 10112
Clavariaceae (Fungi), p.1862³
 relationship to *Hydnaceae*, 15462
Clavaspis (p.1875⁴), n. sp., 10605
Clavator (Algae) (p.1860²), tax., (J)17481
Clavator (Moll.) (p.1872²), tax., (E)16009
CLAVATORACEAE † (Algae) (p.1860²)
 (J)17481
Claviceps (p.1861⁴) *paspali*, reaction of
Paspalum spp. to, 10345
 purpurea. (See also *Ergot*.)
 Clay. (See *Soil*.)
Claytonia nevadensis, identity, 4789
 Cleaning fluids, for textiles, disinfectant
 efficiency, 15341
 Cleavage. (See also *Cell division*; *Eggs*.)
 behavior of cell surface during, 4397
 first plane, factors locating, *Chaetop-*
terus, 7120
 of frog egg, colchicine as affecting,
 3771
 karyokinesis during, zebra fish, 13327
 in marine eggs, ultra-violet as affecting,
 768
 relative dist. of time in mitotic phase
 during, 17037
 spiral, centrifugal force as affecting,
Urechis, 4398
Cleidodiscus (p.1870³), n. spp., 6794
Cleistanthus (p.1866³), n. spp., 15505
 Cleistogamy. (See *Pollination*.)
Cleistogenes (p.1864³), n. spp., 2835
Cleistamia (p.1877⁴), n. spp., 14254
CLEITAMOIDES (Dipt.) (p.1877⁴), 14254
Clematis (p.1865²), tax., 15486, 15491
Clemmys (p.1880³) *gutata*, in Indiana,
 12435
marmorata, in Brit. Columbia, 3402
Cleome (p.1865³), n. sp., 2865
Cleopatra (p.1872³), n. sp., 3297
Cleridae (Coleoptera), p.1876³
Clermontia (p.1867³), revision and n. spp.,
 11896, 11897
Clerodendron (p.1867³), n. sp., 2882
Clethra (p.1866²), n. sp., 2882
Clethrionomys (p.1882³) *d. dawsoni*, *Izodes*
 from, Alaska, 1504
gapperi gapper, from Virginia, 5243
glareolus, ecology, 5239
 Clevalandellidae (Protozoa), p.1868³
Clidadium (p.1867⁴), n. sp., 13751
Cleidemia (p.1866³), tax., 2882, 17526
 Climacteric. (See *Menopause*.)
 Climate. (See also *Drought*; *Environment*;
Meteorology; *Phenology*; *Season*;
 and under special climatic factors,
 e.g., *Altitude*; *Humidity*; *Tempera-*
ture; *Plant diseases*, *environmental*
relations.)
 artificial, human ecology and, book,
 16232
 of British Isles, official records, 16231
 of Carolina highlands, 14390
 changes, during middle European glacial
 and post glacial periods, 12585
 relation to climatic communities, 9010
 classification, drought and, 5369
 of Morocco, 7192
 vegetation types and, Mexico, 12593
 desert and steppe, relation to tree
 growth, 9029
 effect on:
 abundance and fertility of nano-
 plankton, Mediterranean, 16270
 amebiasis path., 15945
 development of tongue and wing of
 honeybee, 1533
 of winter rye in North German
 Plain, 10761
 Europeans, 14391
 flea population on rodent, 1514
 granary beetle, 5047
 grapes, wine-making qualities, 3013
 hematopoiesis, 14513
 insect population, 1487
 oil content, *Soja hispida*, 3046
 organic matter in soil, 1218
 ovulation dosage in Friedman test,
 rabbit, 16659
 red cell count and Hb, man, 3619
 2nd generation of corn borer, 10418
 snails and fascioliasis, England and
 Wales, 12261
 soil microorganisms, 13686
 wool growth and quality, 13353
 epidemiological relations, 11711
 of high altitudes, pathology, 16240
 and human biology, book, 8980
 interglacial in middle Europe, 9018
 of Japan-Hondo, 3505
 of last glaciation, review, 3483
 micro, effect on moss communities,
 Jutland, 10788
 of forests, as affected by spruce
 understory, 4894
 in irrigated cotton fields, India, 2931
 of meadow and pasture, relation of
 insect pests to, 15904
 relation to water losses from tree
 trunks, 10757

- of slopes of ridge, Monroe County, Indiana, 3511
studies of wind, 8552
of Netherlands Indies, 1825
postglacial, of Idaho, 9016
of southern New England, 16255
relation, to bollworm population of cotton, Punjab, 3184
to cardio-vascular diseases, 995
to influenza, 15310
to metabolic and circulatory diseases, 986, 9887
to renal diseases, 995
to respiratory disease mortality, 6209
to skin pigmentation, 5903
to speciation, 8901
to underground plant materials in grasslands, 16265
rôle in tuberculosis mortality rates, 10756
variations, bibliography, 16230
zones, of northern Italy, 8540
Climax, *Quercus-Carpinus* forests of Europe, 7217
vegetation, 9010
India, 9009, 9028
Clinostomidae (Platyhelminthes), p. 1869³
Clinostomum (p. 1869³), sp. in *Amphiuma*, 6716
intermedialis, redescribed, 15991
Clinton, George W., herbarium, 1083
Clitocybe (p. 1862²), tax., 6339, 6352, 8403
Clitoris, as influenced by ant-pituitary-like hormone, rat, 9312
by progesterone, 9311
Cloacitrema (p. 1870³) *michiganensis*, in sandpiper and stilt, 17939
Cloeon, larvae, metabolism, 16469
Clone, of economic plants, relation to disease epidemics, 3169
rubber, for Ceylon, 10225
Clonorchis (p. 1870⁴), in Chinese, 6720
sinensis, as influenced by dyes in vitro, life history, 17932, 17933
Clostridium (p. 1861¹), antisera, titration, 17217
antitoxin, standardization, 17206
butyl-alcohol fermentation of wood sugars by, 11770
butyl-alcohol-producing spp., growth factors for, 6311
classification, 1054
in cow feces after silage feeding, 6291
infections by gas-gangrene forms, therapy, 15347
lysozymic lysates, specificity and toxicity, 878
proteinases, 15424
serum inhibition, 15162
in surgical infections, chemotherapy by sulfonamide compounds, 4533
toxic filtrates, effect on embryonic chicks, 11526
toxins, effect on tissue metabolism, 288
turkeys infected by, 11733
bifermentans. (See also *Bacillus sordellii*; *Clostridium s.*)
relationships, 17206
botulinum. (See also *Clostridium parabolulinum*.)
amino-acid utilization by, 10079
animal rôle in spread, 975
immunization to, in livestock, 6224
as influenced by sinus tract pus and emulsion, 17151
toxin, cerebrospinal fluid effect on brain-adsorbed, 2577
toxoid vaccination against, 6120
type-B, in home-canned vegetables, 17383
butyricum. (See also *C. pasteurianum*; *C. tyrobutyricum*.)
isopropyl alcohol fermentation of wood sugars by, 11770
lactic acid-racemizing enzyme, properties, 6260
peptidase, 2749
chauveti, exotoxin, production in spores, 941
serological comparison of strains and para-form, 940
chauvoei. (See *Anthrax, symptomatic*.)
ethylcum, alcohol-producing form from *Hibiscus sabdariffa*, 4697
histolyticum. (See also *Bacillus histolyticus*.)
enzymatic adaptation in, 192
fibrinolytic properties of filtrates, 4440
peptidases formed by, 191
protease secretion by, 190
Clostridium (continued)
histolyticum (continued)
serological and cultural studies, 8242
toxin, antitoxin binding relations, 9831
titration, 17217
novyi. (See *Bacillus oedematis*.)
parabolulinum. (See also *C. botulinum*.)
extracellular proteolytic system, toxin production and, 13698
A, nutritional requirements, 11793
toxin production by, media for, 11793
pasteurianum. (See also *C. butyricum*.)
morph., biochem. and serological properties, 4708
spoilage of acid canned foods by bacteria related to, 13677
perfringens. (See also *Bacillus perfringens*; *B. welchii*; *Clostridium w.*)
antisera, titration, 17217
chemotherapy of infections, 9914
flocculative reaction of toxin-antitoxin, 9895
immunization to, by formol-toxoid, 4496
by toxin-lectin mixture, 4432
toxin, titration, 17217
septicum, toxin, titration, 17217
sordellii. (See also *C. bifermentans*.)
antitoxins, standardization and comparisons, 17206
relationships, 17206
toxin, prep. and deterioration, 17206
production compared to others of group, 15268
tetani. (See also *Tetanus*.)
antitoxin, demonstration of small amounts, 2528
neutralization of intramusc. injected toxin by, nerve resection as affecting, 11530
permeability of vascular meningeal barrier to, 13486
standardization by Ramon flocculation test, 871
titration method, 4462
formol toxoid, immunizing power, 820
immunization to, antitoxin passage to cerebrospinal fluid in active and passive, 6102, 6103
incidence in intestines of normal sheep vs. tetanus in man, 8327
lymphocytes in vitro as affecting, 11550
toxin, adsorption by bone-black, 6092
distr. route, 6174
effect on guinea pig spp. and strains compared, 4513
as influenced by Cu treatment, 13454
by peptone, 8143
intraspinal inj. method and effects, 961
mechanism of action, 6174
passive immunity as influenced by inj. route, 11529
permeability of C-N-S barrier to, 11529
transmission route and mechanism of action in vivo, 17116
toxin broth, antigenicity and toxicity as influenced by tryptic digestion, 11542
toxoid, antitoxin titer vs. time after immunization by, 2576
tyrobutyricum, effect on silage, 4688
tyrosinogenes. (See *Bacillus t.*)
welchii. (See also *C. perfringens*.)
anaerobic food poisoning bacillus from sausage resembling, 13618
antisera, biological effects of commercial, 872
capsule demonstration, 6079
coconut milk media for, 4707
differential medium for, Na₂SO₄ in, 8273
differentiation, by modified Wilson-Blair medium, 17356
hemolysin, factors in production, 4498
immunization to, antiserum selection for, 872
nitrate reduction to NH₃ by, 8367
polysaccharides, serological differentiation, 6079
strains, serological differentiation, 877, 6079
toxin, factors in production, 4498
sulfanilamide as affecting, 15184
Cloth. (See *Textiles*.)
Clothes moth. (See *Tinea pellionella*; *Tinea biselliella*.)
Clothing, disinfection, by chem. cleaning processes, 15341
Clover(s). (See also *Trifolium* and other genera.)
as alternate crop with sugar beets, 2954
berseem, culture on alkaline soils, India, 2956
chem. comp. and growth, fertilizer as affecting, Sweden, 6455
crimson. (See *Trifolium incarnatum*.)
forage value, types compared in Vt., 4339
Japan. (See *Lespedeza*.)
Ladino, culture and fertilizers, Oregon, 15568
red, *Bostrytis anthophila* on, 14045
as host of potato yellow dwarf virus, 17794
leafspot (*Macrosporium sarcinaeforme*), 14044
leafspot (*Stagonospora recedens*), 3109
pollination by bumble bees, 15562
rooting of cuttings, hormones as affecting, 10806
silage, kind and amount of acid required, 5991
value as forage crop and in pasture management, England, 15541
silage, fermentative processes in, 1029
sweet. (See *Sweet clover*.)
white, in grassland, factors affecting, 10180
Clover leafhopper, biol. and control, 17880
Clover midge. (See *Contarinia medicaginis*.)
Clupea. (See also *Herring*.)
growth rate, 1859
harengus, growth and food habits in Clyde, 12629
sprattus, spawning area, 1862
Clupeidae (Pisces), p. 1879¹
Clupeine, prep. and comp., 4575
Clusiaceae (Dicotyledones), p. 1866²
CLYMENIA (Dicot.) (p. 1866²), 13761
Clypeolella (p. 1861⁴), n. spp., 17498
Cnemidricus (p. 1881¹), n. subsp. and n. combs. in, 7036
Cnidosporidia (Protozoa), p. 1869³
Coagulants. (See also *Blood coagulation*; *Coagulation*.)
anti, from red alga, 4111
Coagulation. (See also *Denaturation*; etc.)
of blood. (See *Blood coagulation*.)
of perivisceral fluid of *Arbacia*, factors affecting, 247
Coal. (See also *Tar*.)
mine, rats carrying plague, 8800
tar oil, in control of aphid and red mite, 12180
Coastal. (See *Littoral*.)
Cobalt, -deficiency disease, in livestock, 17385
effect on growth, plants, 1407
on hypochromic anemia, 7872
in foods, 5518
nitrate, effect on baldness due to maize diet, rats, 13145
Cobefrine, effect on:
heart-lung prep., 2292
iris sphincter, 13155
smooth muscle, 11216
Cobra, antiserum, in snake-bite therapy, 9880
venom, Cu treatment as affecting, 13454
effect on kidney and liver, 12643
..... 13166
histamine liberation by and formation of lysocithin, 520, 521
inactivation by cholesterol preps., 819
spreading factor and effect on action, 2529
Cobus ellipsipyrrenus, *Eimeria* in, 14204
Cocaine, anesthetic action enhanced by egg albumin, 546
corneal anesthesia, factors affecting, 7800
derivatives, anesthetic action as affected by morphine and egg albumin, 4141
pantocaine, effect on nasal mucosa, 13151
percarine, detoxification in organism, effect on sensitivity of muscle fiber, 4130
..... 14752
detoxification in organism, 4130
effect on:
blood vessels, 7755
cornea, conc. and, 16803
Gasterosteus aculeatus, 14844
intestine, 13150
iris muscle, 4045, 13150
liver lipids, mice, 5594
nerve excitability, 14713

- Cocaine (*continued*)
 effect on (*continued*)
 pressor action of tyramine, . . . 11247
 retractor penis, dog, . . . 7783
 sensitivity of muscle fiber, . . . 14752
 skeletal muscle, . . . 14330
 splanchic control of pancreas, 16685
 sympathetic nervous system, . . 14331
 Coccaceae (Bacteria), p.1861¹
 Coccidae (Hom.), p.1875⁴. (See also
Scale insects.)
 on citrus, cyanide fumigation for,
 S. Africa, . . . 17860
 epidemiology of *Aspidiotus*, Hungary,
 . . . 17861
 of South Africa, . . . 18019
 as test insects for oil insecticides, 1530
Coccidia (Prot.), p.1868⁴. (See also
Coccidiosis; and under genera, e.g.,
Coccidium, *Eimeria*, *Isospora*.)
 in intestine of snake, . . . 12286
 in kidney, snails and slugs, . . . 10523
 in snake, . . . 6770
Coccidiosis (p.1863⁹), life-cycle, . . 4639
 primary infection in man and animals,
 . . . 6204
immitis, coccidioidin skin test for in-
 fection by, . . . 8122
 primary infection, pathology, . . 4640
 pulmonary granuloma due to, arrested
 lesions, . . . 15270
Coccidioidin, skin tests with, . . . 8122
Coccidioidomycosis, pathogenesis of initial
 acute stage in man and animals,
 . . . 6204
 primary infection, path., . . . 4640
 chlamydospore relations, . . . 4639
Coccidiomorphs (Protozoa), p.1868⁴
Coccidiosis. (See also *Coccidia*; and under
 genera, e.g., *Coccidium*, *Eimeria*,
Isospora.)
 avian, chemotherapy, . . . 15200
 in chicks, buttermilk in ration as
 affecting, . . . 9820
 mortality of caecal, ration as affect-
 ing, . . . 8237
Eimeria hagani in lesions, . . . 8720
 lesions in intestine, . . . 8720
 in cattle, . . . 15957, 17892
 in poultry, bulletin, . . . 6731
Coccinella, elytral spot morphology, 3334
Coccinellidae (Coleoptera), p.1878³
 elytra, pigmentation spot, variability
 and ontogeny, . . . 8334
 as predators of aphids, Ont., . . 10451
Coccogoneales (Algae), p.1860³
Coccoid bodies, intracellular, in ticks,
 . . . 11623
Coccomyces hiemalis, on cherry, control,
 . . . 3169, 15833
 on *Prunus serotina*, control, . . 12160
Coccophoridae (p.1878³) *tshirchii*, parasite
 of *Laccifer*, . . . 14102
Coccospora (p.1863⁹), *Sphaerosporium*
 separated from, . . . 13736
Coccosteidae (Arthrodira), p.1878³
Coccothrinax (p.1864⁴) *argentata*, n. comb.,
 . . . 11862
Oococcus(i), gram-positive, lysis by soluble
 agent from soil bacillus, . . . 6160
 infections by, chemotherapy, . . 15182
 from surgical foci, virulence detn.,
 . . . 13607
Coccyzus (p.1881⁴), food habits, . . 9064
americanus americanus, blood parasites,
 . . . 3257
 Coccineal insects. (See *Coccidae*.)
 Cochlea. (See under *Ear, labyrinth*.)
Cochliomyia (p.1878³), in animal wounds,
 treatment for, . . . 15923
 seasonal abundance, . . . 5058
 traps for, . . . 5061
americana, attracted to tick bites,
 control, . . . 5068
 emergence of larvae, as affected by
 KOH and H₂SO₄ in soil, . . 1519
 pH of myiatic wounds as affecting
 oviposition in, . . . 8659
 larvae, pH of wounds inflicted by,
 sheep and goats, . . . 3200
 induced immunity to, exptl., 12220
 life history, . . . 15918
 in myiasis, incidence of, . . . 5056
 oviducts for, essential oils as, 14139
 vegetable foods of, adult, . . 12212
hominivorax, in calf, . . . 3203
macellaria, larvae, ingested, fate of,
 . . . 1515
Cochliopodium (p.1863⁹) *butimbosum*, crys-
 tals in, . . . 3254, 6760
Cochliotheca (p.1877³), n. sp., . . 6934
Cockatoo, spp., iris color in, . . 5204
 longevity, . . . 8826
Cockerskites (p.1880⁴), descriptions and
 key, . . . 5161(E)
 Cockle bur. (See *Xanthium*.)
 Cockroach. (See also under genera, e.g.,
Blatta, *Periplaneta*.)
 German. (See *Blattella germanica*.)
 as interm. host of *Protoparva*, . . 15955
 of western Washington, . . . 14272
 Cocksfoot. (See *Dactylis glomerata*.)
 Cocoa. (See also *Cacao*; *Theobroma cacao*.)
 insect pests, weevils, New Guinea, 8636
 Coconut, breeding and pollination, . 8494
 copra, curing, SO₂ in, . . . 13889
 cover crops for, New Guinea, . . 4875
 insect pests, biological control, Puerto
 Rico, . . . 8669
 lalang grass as affecting, . . . 11978
 -milk, in culture media, . . . 4707
 oil, fatty acid analysis, . . . 16493
 origin and history, . . . 1253
 Sesava on, . . . 17857
 control, . . . 5017
 wilt (physiogenic), in Brit. Guiana,
 . . . 8601
 Coconut scale. (See *Aspidiotus destructor*.)
 Cocoon. (See *Butterflies*; *Lepidoptera*;
Moths.)
Cocos nucifera. (See also *Coconut*.)
 Cod. (See also *Gadus*.)
 bacterial flora of normal, . . . 4695
 early and late spawning, . . . 3531
 growth rate, . . . 1870
 method of detn., . . . 3528, 5404
 of year classes, . . . 1872
 as interm. host to *Porrocaecum*, . 10496
 Cod liver oil. (See also *Ergosterol*;
Vitamins.)
 bactericidal power, . . . 13648
 ingestion dystrophia of liver in piglets
 after, . . . 2707
 effect on skeletal muscle, guinea pig,
 . . . 9623
 I value of unsaponifiable matter, . . 301
 stability of vit. A in, . . . 17097
 as supplement to milk diet for calves,
 . . . 17088
 therapy, in trichinosis, effect on blood
 chem., . . . 6751
 value in pig feeding, . . . 15093
 in poultry ration, . . . 17097
 vit. A and D in, book, . . . 15686
 vit. A detn. in, . . . 12835
 Codeine, derivatives, toxicity, age and,
 . . . 11218
 effect on cilia of respiratory tract, 5750
 morphine synergy on cough and resp.
 tract cilia, . . . 5751
 in tuberculosis, . . . 2293
Codium (p.1860³) *prostratum*, . . . 2793
 Codling moth. (See also *Carpocapsa*
pomonella; (= *Cydia pomonella*.)
 control, Ind., . . . 17856
 Kansas, 5 yr. summary, . . . 10399
 false. (See *Argyroplaca leucotreta*.)
Codonanth (p.1867²), n. sp., . . . 6437
 Coefficient(s). (See also *Biometry*; *Correla-*
tion; *Statistics*.)
 economic, of bacteria, . . . 6313
 Coelacanthidae (Pisces), p.1879¹
 Coelacanthaceae (Algae), p.1860³
 Coelenterata p.1869²
 Coelom, common, resulting from surgical
 union of animals, . . . 11074
 extra embryonic, development in rat,
 . . . 5950
Coelus (p.1876³) *gracilis*, . . . 12342
Coenomyces (p.1861²), classification, 17490
Coenurus cerebralis, in sheep, Sweden, 5091
 Coenzymes. (See under *Enzymes*.)
Coenitrema (p.1870¹), syn., . . . 6788
Coffea (p.1867³), (See also *Coffee*.)
 chromosomes, relation to stomata
 number, . . . 12502
 Coffee. (See also *Coffea*; *Caffeine*.)
 Blue Mountain, in Jamaica, . . . 8501
 caffeine K chlorogenate in, diuretic
 action, . . . 7763
 and caffeine in nutrition, . . . 5528
 clinical effects, review, . . . 4156
 culture and statistics, India, . . 2998
 effect on skin temp. and insensible
 perspiration, man, . . . 11252
 pharm., review, . . . 4110
 production in relation to rainfall, 16234
 roasted, staleness due to oxidation,
 . . . 11767
 root systems and water content of
 organs, detn., . . . 1239
 soils and fertilizers for, Hawaii, 13875
 tar, cancerogenic action, rabbits, 13221
 wax resulting from Kaffee-Hag process,
 chem., . . . 12052
 yield variations in Hawaii, causes,
 . . . 17624
Cogswellia (p.1866³), n. sp. and key to
 Washington spp., . . . 1158
Coilodesme, n. sp., . . . 8384
Coitocacum (p.1870¹) *anaspidis*, life his-
 tory, . . . 17937
 Coitus. (See *Copulation*.)
 Cola, effect on work efficiency, man, 16777
Colaptes auratus-C. cafer hybrids, . . . 86
cafer collaris, feather pigmentation, 5207
 Colchicine, effect on:
 chromosomes, . . . 7102
Triticum, Secale, . . . 16154
 chromosome number, *Nicotiana*, 16188
 and cell size, plants, . . . 3448
 in *Triticinae*, . . . 7134
 embryo sac development, *Tradescantia*,
 . . . 1712
 fertility, *Hyoscyamus niger-H. albus*
 hybrids, . . . 70
Triticum-Agropyron hybrids, 14364
 leucocyte formation, . . . 11213
 lymphoid tumor, mice, . . . 591
 mitosis, larval amphibians, . . . 2472
 in skin, . . . 16994
 in ventral prostate, rat, . . . 3795
 plant cells, . . . 8903
 resemblance to x-ray effects, 18082
 plant tumors, . . . 6666
 effects, compared with acenaphthene,
 . . . 16160
 induction of polyploidy by, buckwheat,
 . . . 16186
 lettuce, . . . 12538
Petunia, . . . 14347
 plants, . . . 71, 1698, 8941
 sugar beet, . . . 14363
 inhibiting crown gall, . . . 14086
 and organ-forming substance, modifica-
 tions due to, . . . 46
 as plant hormone, . . . 6567
 properties and effects, review, . . 16193
Colchicum, as ornamental, spp. and vars.,
 . . . 11973
 Cold. (See also *Freezing*; *Hardiness*;
Temperature.)
 anhydremic response, relation of hypo-
 thalamic nuclei to, monkey,
 . . . 12643
 effect on:
 amphibian lymphatic hearts, . . 16735
 cardiac refractory phase, . . . 13123
 crossing over, *Antirrhinum majus*,
 . . . 1501
 fermentation and gum formation,
 sugarcane, . . . 17578
 inflammation, rabbits, . . . 14919
 plant cells, . . . 4946
 plasmolysis as affecting, . . . 3087
 potatoes, yield and storage, . . 2949
 sugarcane, windrowing as affecting,
 . . . 17586
 viability, corn, . . . 17591
 wheat seed, vernalization and, 17698
 front, relation to toxicity of morphine
 sulphate, mice, . . . 10759
 injury, to apple trees, bridge-grafting
 and inarching as affecting, 2987
 to plants, mechanism, . . . 6609
 pressor test, vs. breath-holding, in blood
 pressure detn., . . . 11160
 and CO₂, effect on blood pressure,
 . . . 11179
 response to, in nembutal anesthesia,
 dog, . . . 12643
 seedless peaches produced by, . . 1242
 Cold(s). (See *Coryza*; *Respiratory tract*,
infections.)
 Cold-blooded animals. (See *Poikilothermes*.)
 Cold hardiness. (See *Hardiness*.)
 Cold storage. (See *Food, preservation by*
Freezing; *Refrigeration*.)
Coleophora (p.1877³) *pruniella*, life hist.,
 and parasites, . . . 14109
Coleophoridae (Lepidoptera), p.1877³
Coleoptera (p.1876⁴), (See also *Beetles*.)
 Cerambycidae, of India, life hist.
 studies, . . . 16027
 as interm. hosts of poultry nematode,
 . . . 10478
 pests of *Derris*, . . . 12238
 relict fauna of East Alps, . . . 7182
Coleoptile(s). (See under *Seedling*.)
Coleosporium veronicae, on *Pinus rigida*,
 . . . 15889
Coleus, new unstable gene for ruffled
 leaves, . . . 5327
 translocation of heteroauxin, in polarity
 related to, . . . 13985
 Coli-aerogenes index, of water pollution,
 technic and value, . . . 13650
 Colimeter, direct result, . . . 12643
Colinus (p.1881²), food habits, . . 9064
virginianus, eggs, as food of *Sciuridae*,
 . . . 5230
 food habits, . . . 9066
 grit requirement, . . . 5423
 Colitis. (See under *Enteritis*.)

- Collagen, amino acid detn. 7290
structure, micellar concept. 17689
warm water as affecting. 5450
Collard(s). (See *Brassica oleracea*.)
Collemaceae (Fungi), p.1862¹
Collembola, p.1874¹
Colletia (p.1866²), spp. notes. 10152
Colletotrichum (p.1862⁴), tax. 1421, 2811
 circinans, use in testing growth hormones. 3067
 falcatum, seta production in cultures. 3169
 gloeosporioides, on avocados, in storage. 13915
 latent infection of tropical fruits due to. 8599
 graminicolum, on grasses. 15889
 hendemethianum, on beans, inheritance of resistance to. 1369
Collins, Guy N., biography. 1681, 3430
Collocalia unicolor unicolor, new cestodes from. 6785, 6786
Collodion, film, in study of epiphytic fungi. 17850
 sac, for animal experimentation, 17299
 gonococcus survival in, in vivo, 17146
Colloid(s). (See also *Adsorption*; *Ultrafiltration*; etc. Also specific colloids, e.g., *Albumin*, *Gelatin*, *Proteins*.)
 autocatalytic (?), 15240
 in conifer leaves, effect on osmotic pressure. 13995
 electrical charge, ion series and, 12657
 gel, formation with sugar and tobacco juice. 17745
 of soap, narcotic-analeptic antagonism on. 16765
 metallic, effect on complement. 9867
 micellar theory. 12646
 osmotic pressure. (See under *Osmotic pressure*.)
 of blood. (See under *Blood*, *osmotic pressure*.)
 pollen-extract ultrafiltrates activated by. 6074
 protoplasmic, electric charge. 7252
 of soil. (See under *Soil*.)
 solutions, particle size and surface area. 1868
 of wheat, solvation, winter vs. spring vars. 2948
Collomia (p.1867¹), n. syn. 1168
Collops (p.1876¹) *quadrinaculatus*, predator, eggs of *Blissus*. 5066
Collybia (p.1862²), limits. 11825
 fusipes, sclerotia. 10110
Colocasia, leafhopper on, Hawaii. 3182
Coliquorum esculentum, as food plant, Fiji. 1241
Colon. (See under *Intestines*.)
Colon-Aerogenes group of bacteria, differentiation, N availability in. 2769
Colon bacillus. (See *Colon* group of bacteria; *Colon-aerogenes* group of bacteria; *Colon typhoid* group of bacteria; *Escherichia* spp.)
Colon group of bacteria, classification. 3301
 of bovine milk and fecal forms, 1061
 differentiation, optimum temp. for. 17457
 forms included. 17464
 lecithin-broth culture as affecting. 17305
 milk-containing media for. 10075
 mutations in, citrate + and - strains. 2771
 N fixation by *Azotobacter* alone and symbiotically with. 17434
 sugar-alcohol utilization by. 2757
 in surgical infections, chemotherapy by sulphonamide comp. 4553
 variability in vivo. 18709
 viability in reservoir-stored water. 13651
Colon-typhoid-dysentery group of bacteria, photodynamic action of safranin on. 2687
Colon-typhoid group of bacteria, differential media. 4664
Colonization of abandoned crop lands by grasses, Colorado. 126
 of abandoned fields, Nebraska. 9019
 of abandoned granite quarries by plankton. 14401
 of alien land by ants, factors in. 16250
 of caves with fauna, flooding and, 12573
 of Mt. Goentver, Java. 7210
 of mud flats by *Puccinellia*. 16256
 pioneer vegetation in Alaska. 7191
 of rocky shore by Annelida, Crustacea, and Mollusca. 12577
 of soil after sterilization by invertebrates. 12572
Color(s). (See also *Albinism*; *Coloration*; *Colorimetry*; *Dyes*; *Pigments*; *Stains*; *Variegation*.)
 body, humidity as affecting, wood rat changes. (See also *Pigment cells*.)
 in animals, discussion. 11083
 in *Anolis carolinensis*. 9453
 corpus allatum as affecting, insects. 12980
 in flatfishes. 14662
 in lizards. 3937
 in reptiles. 3936
 in response to background temp. and, fish. 5678
 to chemicals, *Xenopus*. 13051
 visual stimuli as affecting. 11122
dominant vs. recessive in Crustacea spp. 12328
of eye and egg, ovarian transplants as affecting, *Bythya mori*. 7159
flower, mosaic disease as affecting, tulip. 1439
 mutations for, *Camillia japonica*, 5308
 nomenclature, for drugs. 1336
 for flowers and fruits. 2996
 patterns. (See *Mosaics*.)
 morphogenesis in Lepidoptera wing. 10615
 selection, in Wensleydale sheep. 1765
 vision. (See under *Vision*.)
Color blindness, crossing over hemophilia and. 1796
 and hemophilia, a pedigree. 1797
 in monkeys. 14705
 total, inheritance, man. 14377
Coloration. (See also *Albinism*; *Melanism*; *Mimicry*; *Pigment cells*.)
 animal of African cattle. 2481
 autumnal, relation of anthocyanins to. 1404
 protective, in desert reptiles of U. S. 18053
 in *Euchelia* moth. 10775
 in *Salamandra*, distr. of red form. 12484
 of tadpole, infundibular lesion as affecting. 448
Colorimeter, photoelectric, for analyzing plant ash. 4953
 for bacterial metabolic studies, 11790
 for detn. of alcohol in blood and urine. 1922
 of blood carotene. 14483A
 of Cu and Fe. 12727
 of oxy, met. and sulfhemoglobin in single sample. 1919
 of spinal fluid protein. 1930
 of tryptophane. 218
 filter, for pyruvic acid detn. 7306
Colorimetry. (See also under special subjects, e.g., *Hydrogen-ion concentration*, *Indicators*, *Nephelometry*, *Oxidation reduction potentials*, *Spectrophotometry*.)
 in soil analysis. 8488
Colostrum, composition, horse. 11493
 immunity transfer via, 9905, 9906, 9907
 in trypanosomiasis. 15177
 substitutes, for foals and lambs. 2435
Colpidium, digested by *Amoeba*. 8721
 Glaucoma group of ciliates, antibody reactions. 8172, 8173
 campylum, O₂-consumption measurement and data. 5100
Colpoda (p.1868²) *duodenaria*, cyst formation, factors affecting. 17927
 growth and encystment. 6772
Colpomenia (p.1860²), capensis. 2793
Coluber, new lung mite from. 1637
 quatuorlineatus, *Ophidascaris* (Nematoda) from. 14216
Colubridae (Reptilia), p.1880⁴
 dangerous spp. in Cameroon. 10633
 Columba (p.1881³). (See also *Pigeon*.)
 food habits. 9064
 intermedia, *Eimeria* from. 8258
 livia, tapeworm from. 15988
 Columbensis fever, notes and case report. 13615
Columbidae (Aves), p.1881³
 immuno-genetic studies of species relationships. 5343
 species differences, genetic analysis. 14371
Columbiformes (Aves), p.1881³
 Columbin, from *Jateorrhiza*, chem. 12019
 Columnnea (p.1867²), n. spp. 2827A, 2828A
 Columbidae (Aves), p.1881¹
 notes on. 8844
 Columbiformes (Aves), p.1881¹
Colymbus (p.1881¹), food habits. 9064
 arcticus sushkini, pairing in. 8844
 griseigena, in Nevada. 5207
 stellatus, fish as food of. 8844
Comb. (See under *Domestic fowl*.)
Combretaceae (Dicotyledones), p.1866³
 Combretum (p.1866³), n. spp. 2828
 Commensalism. (See also *Parasitism*; *Symbiosis*.)
 of beetles and wood stain fungi on *Abies*. 1428
 of blind goby and shrimp. 14286
 and domestication. 10739
 of gall-flies, mites and midges in willow gall. 1625
Community(ies). (See also *Life forms*; *Symbiosis*.)
 algal and faunal of coast of S. Africa, zonation. 9005
 biota of beechwood cavities. 1831
 of fresh water swamp, Louisiana. 5368
 biotic, concept. 10751
 dynamics, book. 12564
 concepts and problems of various schools. 9011
 fresh water, concepts and trends in. 1336
 of glacial till plains, quadrat studies, Indiana. 12592
 Hydractinia-algae, on hermit crab, inhabited snail shells. 15982
 intra and interspecific effects of various groups of organisms. 5391
 plant and animal of Five Islands, ecol. survey. 3481
 principle of relative optimum and. 103
 static and dynamic aspects. 9010
 synecological, ecological patterns. 5365
 animal, activity and metabolism of fish in. 434
 aggregation of tadpoles in relation to chemicals and light. 7615
 of Bird Creek region, Oklahoma, 111
 crowding in relation to development of social instincts. 9000
 in decaying pine and oak stumps, factors affecting. 10773
 of Germany, program for study. 12579
 habitats of aquatic and terrestrial molluscan, ecology. 8993
 insect, caste detn. in *Reticulitermes*. 1536
 of meadows and pastures. 15904
 population dynamics of social. 8997
 of sweet-corn fields. 6898
 littoral, ecology. 9002
 of marsh, Idaho, book. 10659
 prairie of Kansas, predator-prey relationship. 5378
 rodents of forested areas, Minnesota. 3496
 social life of animals, book. 8976
 possible origin. 9000
 society, evolution and dynamics. 8996
 stratification in relation to environment. 8998
 in tree holes. 5377
plant, algal, lichen, on Lunz sandstone of Central Europe. 6367
 marine, Isle of Man. 121
 of salt marshes, Britain. 16253
 alpine and subalpine of middle Himalayas. 5386
 of beech forests, Denmark. 5383
 bryophytic, distr. bark factors affecting. 1886
 concept. 10782
 near Coolum. 1837
 of Danish conifer plantations, analysis. 5382
 distr. and floristic composition, Morocco. 7192
 distr. of mosses in, Jutland. 10788
 Festuco-Agrostidetum, origin and development on eroded sand, 131
 forest, in Adirondacks, comp. browsing of deer as affecting, 1300
 grassland and forest, coexistence in Nilgiris, India. 9009
 relative distr. in relation to frost. 9028
 of Hungarian hill-lands, climatic and edaphic factors affecting. 7202
 indicators, use in land utilization problems. 16264
 mangrove, species in, Brazil. 5387

- Community (continued)
 plant (continued)
 phytosociological research in Scandinavia, analysis, 5384
 Querceto-Carpinetum climax of N. Middle Europe, ecology, 7217
 Quercetum sessiliflorae, Ireland, 16269
 of regions in northern Russia, ecol., 3512
Rivularia bullata-*Balanus*, as a biome, 16262
 on Se soils, U.S.A., 2925
 shrub, oak-hickory and maple-linden, factors affecting growth, Iowa, 3500
 in slow streams, 7212
 subassociation of Quercetum, ecology, France, 7198
 succession in, France, 5380
 synusia of climbers, epiphytes and shade loving species, Nigeria, 16263
 in *Tazodium* stumps at Reelfoot Lake, Tenn., 5372
 of upper Rhine valley, climax concept, 3509
 Comodesmidae (Myriopoda), p.1873¹
 Complement. (See also *Anticomplement*; *Complement deviation*; *Complement fixation*; *Immunity*; *Serodiagnostics*; etc.)
 blood-group titers, 17224
 Bordet's anti-immune body effect, 917
 components, quantitative detn., 847
 dehydration and preservation method, 6048
 hemolysis by, binding of components in, 8156, 8157
 as influenced by:
 aleuronat, 17218
 anaphylactic shock, 4433
 colloidal metals, 9867
 nephritis, 9859
 phospholipids, mechanism, 927
 serum injections, 917
 vit. A, in health and disease, 2573
 lyophilic, for Kolmer syphilis test, 9994
 mammalian vs. fish, 6082
 quantitative detn. in sera, methods, 9841
 reactivity of fractions, 8156, 8157
 reactivation by ascorbic acid and reduced glutathione, 927
 relation to serum proteins in various spp., 2571
 selective stabilization, 828
 snake, properties, 4434
 titer, of hemolysin vs., 2571
 as influenced by irritation of splanchnic vs. vagus nerves, 4461
 by malnutrition in children, 8106
 after otorhinolaryngological surgery, 2587
 relation to serum proteins and inactivation factors, 2570
 Complement absorption. (See *Complement fixation*.)
 Complement deviation reactions, quantitative relations, 9858
 Complement fixation. (See also *Syphilis Serodiagnostics*; etc.)
 antibodies, transmission to and persistence in offspring, 4582
 chemical analysis, 9851
 of herpes zoster vs. varicella antigens, 843
 "lability" reaction, prevention, 2586
 in leprosy, 6053
 in lymphocytic choriomeningitis, 4511
 in malaria, 6128
 phenol and derivs. as affecting, 929
 in *Plasmodium knowlesi* infections, 8170
 reactions and pseudoreactions, factors in, 828, 2586
 in sera of influenza-virus vaccinated cases, 2558
 specificity of native vs. kokto-serum proteins, 4506
 test, for chancreoid, 4504
 Ghedini-Weinberg, non-specificity in hydatid disease, 14168
 for Hodgkin's disease, 13248
 of Lleras, for leprosy, 8254
 in study of phylogeny of *Drosophila*, 1620
 for syphilis, optimum ratio of cholesterol to tissue extract in, 17336
 with tissue-culture antigen, in latent psittacosis detection, 13458
 for tuberculosis, 8061
 in wild vs. captive mammals, 6253
 varying power of Wassermann-positive sera, 837
 by W.K.K. antigen in various diseases, 8126
 Compositae (Dicotyledones), p.1867⁴
 Composts. (See also *Manure*.)
 cellulose decomp. by fungi and actinomyces in, 11784
 from corn fodder, prep., 6494
 decomp., P transformations in, 17423
 thermophilic, of plant residues in, 8350
 effect on growth of spruce seedlings, 10261
 hypochlorite oxidation, 17432
 vs. manures, for forest-tree seedlings, 15674
 nutrient rôle, 15674
 soil fertility in, manure as affecting, 15574
 synthetic, for mushrooms, prep. and value, 11986
 thermophilic actinomyces and fungi in, 4703
 Compositiypidae (Aves), p.1882³
 Concanavalin, in jack bean, mol. wt., 1344
Conceveiba (p.1866³), n. spp., 2885
 Concretions. (See also *Calculi*.)
 in hog stomach, comp., 16558
 milk, in galactophore sinus of mare, 8317
Condalia (p.1866³), n. spp., 11886
 Conduction. (See under *Heart*; *Nerve*; *Sap*; *Translocation*; *Vascular system*, plant.)
 Conductivity, electric. (See *Electric resistance*.)
 Conductivity water. (See under *Water*.)
 Condylarthra (Mammalia), p.1883⁸
 of Eugene, Utah, 5225
 Congo red, absorption, distr. and sojourn in blood, 10925
 effect on galvanic convulsions, 535
 hematologic actions, 10926
 as pulmonary hemostatic, 16434
 strychnine antagonized by, 535
 toxicity and pharm., 11245
 Congridae (Pisces), p.1879²
 Conidae (Mollusca), p.1872²
Conidobolus brefidianus, 10110
 Conidium(a). (See *Spor*.)
 Conifer(s). (See also *Trees*; and under specific kinds, e.g., *Larix*, *Pine*, *Pinus*.)
 of Brittany, ecology and value, 17512
 Canadian, tannin in bark, 1330
 grown in sand cultures, fungus extracts as affecting, 16259
 hardness of needles, factors affecting, 14025
 leaves, pH, relation to taxonomy, 12118
 osmotic pressure in, colloids as affecting, 13995
 obligate mycorrhizal fungi, reciprocal relationship, 7213
 origin of some angiosperms through *Saltx*, 1169
 phloem, histology and development, 15517
 sawfly on, control, 8652
 seed, 3029
 seedlings, soil-fertility requirements, 4901
Sirex spp. attacking, damage and control, 15926
 Coniferales (Gymnospermae), p.1864¹
 Coniferophyta (Gymnospermae), p.1864¹
Coniturnus (p.1883³) *randi*, 7055
Contioctye furfuracea, on dead fungi, 8416
Contophanes (p.1880³), tax., 10632
Contophora puteana, on *Sequoia gigantea*, 6631
Conioscinella (p.1877⁴) *brachyptera*, wing reduction, 6892
Coniosporium, cellulose-decomposing spp., 1033
Coniothyrium (p.1862³), tax., 15453, 17500
 on elm, as cause of wilt, 1426
fuckelii, in rose canker, control, 1470
 Conjugales (Algae), p.1860²
 Conjugation. (See also *Fertilization*.)
 in *Blepharisma*, relation to size and nutrition, 3260
 in *Paramecium*, 10523
 compatible types, 3262
 mating types, 3269
 related to food abundance, 5099
 CONJUGUTERUS (Platyh.) (p.1869³), 6798
 Conjunctiva. (See under *Eye*.)
 Conjunctivitis. (See also *Netisseria gonorrhoeae*; *Trachoma*; etc.)
 eczematous, blood P in, 11325
 Connaraceae (Dicotyledones), p.1865⁴
 Connective tissue. (See also *Adipose tissue*; *Collagen*; *Fibroblasts*.)
 annulo-spiral perineural sheath of nerve bundles, anatomy, 11889
 capsules around nematode larvae, fish, 10496
 of central nervous system, differentiation in cockroach, 4400
 in development of gliomas, 604
 dye movement in, 3648
 elastic, in mechanics of aorta, 4082
 review, 9414
 fibers, collagenous, distr. in hyaline cartilage, man, 9706
 collagenous and reticular, optical and mechanical prop., 5911
 reticulum, silver impregnation, 15044
 fibrillogenesis, 15063
 incineration, Ca content, 4365
 muscle relationship, quadruple stain for, 17002
 silver impregnation methods, 4368
 tumors, estrogens and, 5808
 virus in chem.-induced, fowl, 7842
Conocephalus conicum, morph. of ventral appendages, 11842
Conocephalus (p.1863³), sex chromosomes in, 47
 saltator, as intern. host of poultry nematode, 10478
Conoderus (p.1876²), n. name for *Bt. carinatus*, 8777
Conolophus suberistatus, n. spp. *Alaauris* from, 8785
Conopholis (p.1867³), n. sp., 6429
Conopia exitiosa, in peach trees, control, 6695
 Conopidae (Diptera), p.1877⁴
 CONORYCTELLA † (Mamm.) (p.1882³), 18094
 Conostegia (p.1866³), n. spp., 28274
 2882, 17526
Conostoma (p.1864¹) *oblongum*, seeds, structure of, (Cb), 15431
Conotrachelus (p.1876³) *nemaphor*, on apple, life hist. and control, 3173
 Conservation. (See also *Game*; *Wild-life*.)
 of beavers, effect on population growth, Sweden, 162
 of blue winged teal, 10815
 club operated fisheries, Indiana, 18278
 conditioning of salt marshes for wild life, 9069
 electric fence in wild life management, 5422
 food patches in Wisconsin, 5420
 of fur bearing animals, regulation of trapping, Wisconsin, 5418
 in U. S. and Canada, Federal Lacey Act and, 16287
 of game in Finland, 5419
 of hawks, 5414
 management, manual, 10828
 natural areas, Minnesota, 3542
 of natural resources, book, 15581
 of natural vegetation as erosion control, India, 9031
 need and progress in America, 16288
 of predators in National Parks, 14429
 problems and accomplishments, America, book, 1428
 program, 10823
 of quail, 5414
 refuges, use of chemical sprays in, 10816
 of ruffed grouse, 5839
 soil, in world agriculture, 5870
 of soil and water, bibliography, 7084
 control recommendations, India, 9015
 of soil water and rainfall in arid regions, (See also *Agriculture*; *Rainfall*; *Soil*, water tables. For specific regions, see *Geographic Index* p.1884.)
 of U. S. resources, book, 14317
 of virgin hardwood timber, Minnesota, 3542
 of wildlife, 14430
 on abandoned peatland, 7242
 malaria control by predacious fish, Bengal, 12225
 relation to mosquito control, 10434
 on salt marsh, 12214
 and wild life management, book, 10825
 Constipation, chronic, treatment, 356
 treatment by feeding bananas, 3768
 Constitution. (See *Body*, constitution.)
 Contagious abortion. (See *Brucella abortus*.)
 Containers, paper, for perishable foods, sanitary condition, 13652
Contarinia (p.1877⁴) *juniperina*, from juniper, 18002
 medicaginis, damage to alfalfa, weather factors affecting, 15903
 Contortae (Dicotyledones), p.1866⁴

- Contracecum* (p.1870²), from bird, 10546
larvae, on marine fish, 10496
incurvum, parasite of sword fish, 6795
Contractile vacuole. (See under *Vacuole*.)
Contractility. (See under contractile tissues, e.g., *Muscle*.)
Conularia (Mollusca), p.1872¹
Conuropis, food habits, 9064
Conus (p.1872²), n. sp., 6828
Convolutaceae (Dicotyledones), p.1867¹
Convolutin, bactericidal action, 2688
Convolutus arvensis, carbohydrates in roots, tillage as affecting, 10178
control, Iowa, 17565
eradication, root reserves as affecting, 10176
saepium, *Helicobasidium* on, 13735
water relations, in corn ground, 10177
Convulsions. (See also *Eclampsia*; *Epilepsy*; *Tetany*.)
action of apotroponine, 535
of thujone, depressant drugs as antagonists, rat, 7801
Ca salts in, 13178
in cattle and foxes, vitamin relations, 2692
in childhood, review, 14683
due to cardiazol, effects, 7908, 16949
to carotid sinus reflex, venous pressure in, 498
effect on lactic acid in brain, 5788
in study, 7801
to pressure of sclerotic vessels, 16952
to thujone and camphor, brain changes, 16946
galvanic, dyes as affecting, 535
frogs, 2228
novocaine, treatment, 530
predisposition to thyroid activity and, 388
therapy in schizophrenia, 4296
uremic, in renal hypertension, 503
Cooke, Mordecai Cubitt, biography, 16146
Cooke's blocking substance, formation by pollen treatment, 6068
COOKEANA (Moll.) (p.1872²), n. spp., 5114
Cookeina (p.1862²) *sulcipes*, synonymy, 6349
tricholoma, synonymy, 6349
Cooking. (See also *Canning*.)
effect on:
vit. A in foods, 5552
vit. C in potatoes, 9235, 11017
in spinach, 14565
in tomatoes, 7486
fats for deep-frying at high altitudes, 10060
COONA (p.1882²) *pattersoni* (E), 7054
Cooperia (Monocot.) *smallii*, note, 15492
COOPERIA (Mamm.) (p.1883²) *totaldentata* (E), 7058
Cooperia (Nematoda) (p.1870³) *curtiei*, life history in sheep, 14159
Copal. (See *Agathis alba*.)
Copelatus (p.1876²), n. spp., 6874
Copepoda (Crustacea), p.1873²
as ectoparasites of *Coregonus* spp., 3396
growth, temp. as affecting, 12606
as intermediate hosts of *Dracunculus*, 3248
marine, habitats, 3499
production, growth of diatoms and, 9040
Copnodiaceae (Fungi), p.1861³
Copper, in anemia, 3704, 14512
balance, in children, 310
in blood, in exptl. fever, 12830
thyroidectomy as affecting, 10919
in blood and tissues, in breeding season, salmon, 12827
duck, 12828
fish and frog, 12829
as catalyst, for enzymic ascorbic acid oxidation, 10856
for tubercle bacillus, 10090
compounds, for cucumber beetle control, 17871
in crop plants, Cu fungicides and, 15405
cycle in Connecticut lakes, factors affecting, 3524
deficiency, disease, in *Citrus* spp., 8618
effect on leaf structure, 6664
on tissue cytochrome oxidase activity, rat, 14460
detn., photoelectric, 12727
effect on:
bacterial toxins, 13454
blood sugar, rabbit, 7804
epinephrine and insulin action on blood sugar, 11255
growth, plants, 1407
of tumor cells, 18225
hemoglobin, 7375
Met Hb and HbO₂, 10924
post-malarial anemia in paretics, 5838
response of roots to growth hormones, 6578
snake venoms, 13454
tissue glycogen, 11256
as essential mineral, for tomatoes, 13972
in fetal and maternal blood, 426
in fungicides. (See *Bordeaux mixture*; *Fungicides*.)
in Indian foods, 10949
in insecticides. (See *Bordeaux mixture*; *Insecticides*.)
as insecticide and fungicide, with nicotine-bentonite, 14149
and lecithin, in trichinosis therapy, 8713
metabolism, endocrines as affecting, 12825
role in Hb regeneration, 10922
in plant nutrition, study, 10297
in soils, effect on bacteria and crop plants, 15405
in sprays, chem. and electrical detn. of adhesiveness, 3169
as supplement to milk diet for calves, 17083
tolerance of *Penicillium* to, 1408
in tomatoes, factors affecting, 13916
toxicity to tomato, 5002
arsenate, basic. (See *Arsenicals*, copper, basic.)
carbonate, for control of orange insects, 8639
oxide, colloidal, toxicity and hypoglycemic action, 507
as fungicide, relation of particle size and color to effectiveness, 10373
yellow form as fungicide, 3169
sulfate, in control of bark beetles, 14125, 14126
of strongylids, ruminants, 15947
effect on diphtheria bacillus, 4615
in treatment of sheep stomach worms, 6717
sulfide, colloidal, toxicity and hypoglycemic action, 507
Coppice. (See *Forest*(s); *Silviculture*.)
Copro. (See *Cocoon*.)
Coprinus (p.1862³), tax., 2801, 2808
of Manitoba and Saskatchewan, 10109
urticaecola, on wheat, life hist., syn., 15448
Copris incertus, infested with *Sarcophago*, 12360
Copromonas (p.1868³), Golgi apparatus and vacuole system, 1721, 8915
Coprophyll(s). (See *Manure*.)
Coprophyrym. (See under *Pigments*.)
Copulation. (See also *Conjugation*; *Mating*.)
of algal cells, light and chemicals as affecting, 6600
effect on metabolism of bedbug, 18012
on resistance to toxic substances, mammals, 12929
testosterone as affecting, castrate rat, 9376
Coraciiformes (Aves), p.1881⁴
Corals, of Greenland, (Pr), 3235
(Pal.), review of families, 10534
Coramine, effect on:
alcohol depression, 13178
barbiturate depression, rabbit, 13188
blood pressure, 4171
central nervous system and melanophores, frog and turtle, 2289
coronary vessels, 9572
heart, frog, 7774
narcotic activity, 16765
respiratory reflexes, 14817
expectorant action, 5758
synergic with HCN, 5733
Corbus-Ferry filtrate, in gonorrhea therapy, 9985
Corchorus. (See also *Jute*.)
Cordaitales (Gymnospermae), p.1864¹
morphology, 8369
Cordia (p.1865²), n. spp., 2882
Cordinin, pressor action, 4171
Cordulia (p.1875²), malpighian, tubules, histology, 2477
Cordus, Valerius, herbal of monograph, 7089
Cordyceps (p.1861⁴), n. spp., 15456
Coregonidae (Pisces), p.1879²
Coregonus (p.1879²), ectoparasites of, 3396
clupeiformis, age, growth, and feeding habits, 14423
year classes, growth and sex ratio, 9061
whartmanni developing egg, motion pictures, 15065
Coreidae (Hemiptera), p.1875³
Corella (p.1878³) *eumyala*, distribution, 6946
Coreopsis, native Californian spp., 2880
Coriandrum sativum, seeds, N in, 5521
Corioliopsis (p.1862³), new species, 6353
Coriolus (p.1862²), new species, 6353
Corixa (p.1875²) *punctata*, association of non-homologous chromosomes, 1731
Corixidae (Hemiptera), p.1875²
association of non-homologous chromosomes, 7122
Corizidae (Hemiptera), p.1875³
Corizus (p.1875³) *sidne*, on cotton, 12198
Cork. (See *Suberization*.)
Cork oak, in Algeria, 12011
Corm(s). (See *Stem*.)
Cormorant(s). (See also *Phalacrocorax*.)
distr. and abundance, parasites, breeding notes, 10649
feeding habits, 5201
Corn. (See *Cereals*; *Grain*; *Maize*; *Sweet corn*.)
in bread making, vs. wheat, 2946
grinding and use, Italy, 2947
cations in, soil pH and form of N as affecting, 13979
culture, in Holland, 1201
culture and vars., Mass., 17570
excretion of ions by roots, 13976
foliar diagnosis, fertilizer as affecting, 8567
germ oil, tocopherol content, 12029
growth rate, relation to seed size, 2921
hybrid, European corn borer as affecting, 8644
Lagkitan, 17568
measuring for Michigan, 8469
no. of top-crossed plants needed for test, 2958
for Ohio, 2959
trials in Mo., 15570
hybrids and vars., tests in Ill., 15536
irrigation as affecting, Italy, 1176
length of blooming period, drought as affecting, 13811
organic acids in, pH and form of N as affecting, 12116
root formation, light and heteroauxin as affecting, 3065
variety tests, USSR, 13835
viability, cold and moisture as affecting, 17591
of shelled, detn., 4855
yield, depth and slope of soil as affecting, 17594
Corn billbug. (See *Calendra* spp. (= *Sphenophorus* spp.))
Corn borer, control, Mass., 17570
distr. U. S. A., 1937, 1454
European. (See *Pyrausta nubilalis*.)
Corn ear worm. (See *Heliothis obsoleta* (= *Chloridea obsoleta*))
Corn oil, fatty acids in, 12821
Corn root aphid, as influenced by crop rotation, Illinois, 17865
by plowing date, Illinois, 17864
Corn root webworm, control, 14121
Cornaceae (Dicotyledones), p.1866⁴
Cornea. (See under *Eye*.)
Cornus (p.1866⁴), n. syn., 1158
florida, *Phytophthora* crown canker, 15889
stolonifera, berries, as food of *Eutamias* sp., 14312
Corolla. (See *Flower*.)
CORONASTRUM (Algae) (p.1860²)
aestivale, 4732
Corophium volubator, population, reduction due to disease, 1855
Corpus allatum hormone, controlling reproduction in bedbug, 18012
Corpus callosum. (See under *Brain*, *cerebrum*.)
Corpus luteum. (See under *Ovary*.)
Corpus Luysi. (See *Brain*, *subthalamus*.)
Corpus striatum. (See under *Brain*.)
Corpuscles, blood. (See *Blood cells*; *Erythrocytes*; *Leucocytes*; *Lymphocytes*; etc.)
Correlation (biometrical). (See also *Biometry*.)
book, 7169
intra-class, in agric. experimentation, 10746
normal, significance test, 16222
rank, measurement, 1812
recent advances in, 7168

Corrodentia (p.1875²), classification, 18089
 Corrosive sublimate. (See *Mercury chloride* (HgCl₂)).
 Cortex, plant. (See *Hypocotyl*; *Root*; *Stele*; *Stem*).
Corticium (p.1862³), n. sp., 17492
 descriptive notes, 2812
 centrifugum, on banana, control, 4964
 galactinum, apple root rot due to, 8169
 microsclerotia, bean web-blight due to, 15812
 stevensii, fig leaf blight due to, 1481
 vagum. (See also *Rhizoctonia solani*).
 on cotton seedlings, 14049
CORTICOSPONGIA (Por.) (p.1869³) *bradfordensis* (D), 6775
CORTICOSPONGIINAE (Por.) (p.1869³), n. subfam., (D) 6775
 Cortin. (See under *Adrenal glands, extracts*).
 Cortin-like substances, bio. activity, 9882
Cortinari (p.1862³), tax., 2803
 n. spp. from France, 8393, 8394
Corvidae (Aves), p.1881⁴
Corvus (p.1881⁴). (See also *Crows*).
 spp. banding, 14296
 brachyrhynchus, blood parasites, 3257
 ossifragus, *Pasteurella bovisepica* infection in, 6248
Corydalis (Dicot.) (p.1865³), spp., alkaloids from, chemistry, 12037
 spp., flower, structure and function, 10170
Corydendrium (p.1869³), n. sp., 8413
Corydoras (p.1879³) *arcuatus*, 12420
Corylus (p.1865³) *americana*, atavistic leaf forms, 11853
Corynebacterium, antigenic relationships and methods, 8116
 in cheese from milk of silage-fed cows, 6291
 polysaccharides of spp. and strains, serological comparisons, 9898
 Proteus association, discoloration of sour-milk cheeses due to, 6276
 pyogenic infections of goats and sheep due to, 15358
 diphtheriae. (See also *Diphtheria*; *Schick test*).
 antiserum, proteolysis, physico-chem. relations, 8137
 therapeutic value of avid vs. non-avid, 921
 antitoxin, absorption of refined vs. (NH₄)₂SO₄-concentrated, 882
 distr. coefficients in blood vs. skin with different, 11528
 dyes and disinfectants as affecting, 8154
 elimination rate after repeated antiserum injections, 4505
 horse serum refractive index as influenced by bleeding, 915
 molecular size of different, 11528
 permeability of vascular meningeal barrier to, 13486
 purification by proteolytic digestion of toxin-antitoxin precipitates, 19478
 titer in horse as influenced by bleeding, 915
 attenuation trials (in vivo) negative, 6823
 carbohydrate, effect on bacterial virulence, 8221
 carriers, toxoid as affecting, 17200
 school statistics, 6207
 culture on excised mucosa, 15416
 defense mechanism against, 13429
 differential culture methods, 15280
 differentiation, media for, 17849
 exp. infections and carriers, 17382
 immunity relations and, 17200
 formol toxoid, immunizing power, 820
 growth, inhibition by acid, alkali, or heat-treated blood, 9847
 growth factor for, in blood serum, 10088
 growth regulators for, 4714
 immunization to, by alum-precipitated toxoid statistics, 9894
 antitoxin passage to cerebrospinal fluid in active and passive, 6102, 6103
 conjunctival infection, by low-virulence strains, 801
 immunological surface phenomena in, 11554
 as influenced by CuSO₄ media, 4615
 intoxication by, tissue lipids and, 13405
 mutation to *C. pseudodiphtheriae* not confirmed, 2778

Corynebacterium (continued)
diphtheriae (continued)
 new Schick toxin, 17355
 nutrition of types compared, 8226
 pantothenic acid as growth factor for, 6312
 polysaccharides, non-type-specificity, 2591
 serological types, 17347
 stability of developmental stages and strains, 15416
 synthetic medium for, 2770
 toxin, adsorption by bone-black, 6092
 analysis of action in vivo, 6119
 demonstration in blood in diphtheria, 913
 effect on heart, 16809
 as influenced by:
 bile, 909
 copper treatment, 13454
 dyes and disinfectants, 8154
 epinephrine, 6107
 vitamin-C, 8154, 13514
 toxin-antitoxin, Danysz phenomenon in, 6049
 epinephrine as affecting, 6107
 toxoid, antitoxin titer vs. time after immunization by, 2576
 detection of formaldehyde in, by dimedon method, 13506
 divided vs. single dosage, 894
 effect on antitoxic response and antitoxin persistence, 6090
 potency of diluted vs. undiluted, 2575
 serum antitoxin content vs. local reactions after immunization by, 2574
 single-dose immunization by precipitated, 888
 toxoid intracutaneous reactions, statistics, 13497
 types, 6188, 6198
 in carriers, 17381
 differentiation by blood agar, 6202
 incidence and significance in Ukraine, 4631
 incidence statistics, 4629
 type stability, differentiation and classification, 17354
 typing, blood agar for, 4628
 equi, abortion in buffalo associated, 2712
 serological typing, 13662
 kutscheri. (See *Bacillus pseudotuberculosis murium*).
 pseudodiphtheriae, mutation from *C. diphtheriae* not confirmed, 2778
 pseudotuberculosis. (See *Pasteurella p.*)
 pyogenes. (See also *Bacillus p.*)
 association in verminous pneumonia of Rocky Mountain bighorn sheep, 4678
Coryneum (p.1862³), blight of *Thuja orientalis*, due to, 4965
 cardinale, cypress damaged by, 4967
 8510, 8514
 germination and growth, as affected by sea spray, 17831
Corynorhinus (p.1882³) *rafinesquii pallescens*, in Oregon, 5222
Coryza, allergic, May fly as cause of seasonal, 6088
 equine, sulfanilamide therapy, 11720
 fowl. (See *Fowl-coryza*).
 immunization, intradermal vs. subcut., 17184
 pneumococcal type-I infection in, 983
 resistance to, non-specific factors in, 11547
 vaccines for, statistics, 17149
 streptococcal, 4503
Coscinium (p.1865³), n. sp., 2861
Cosmarium (p.1860³), n. spp., 2789, 11808
Cosmos (p.1867³) *sulphureus*, phloem development and flowering, 10172
Cosmosoma (p.1877³) *auge*, type sp., described, 12400
Cossidae (Lepidoptera), p.1877³
Cossus cossus, on ash, 3196
 Costantin, Julien, biography, 25
 Costmary. (See *Chrysanthemum balsamita tanacetoides*).
Costus macrostachys, *Kernomyces* on, 13788
Cothurnia (p.1863³) *ingenita*, food vacuoles, movement, 3264
 sieboldii, from crayfish gill, structure of case, 8723
Cotoneaster (p.1865³), tax., 1141
 10198, 15486
 Cottidae (Pisces), p.1880²
 Cottiformes, *Normanichthys crockeri* as primitive member, 3385

Cotton. (See also *Gossypium*).
 acromania ("crazy top") disease (physiol.), causes and control, Argentine, 6473
 anthracnose, new var., 1421
 book, 11937
 boron deficiency, microchem. study, 8135
 breeding and seed supply, 17567
 breeding vars. favorable for insect control, 5034
 carbohydrates in, season and fertilizers as affecting, 1185
 cell membrane of fibers, bacterial disintegration and cytology, 11765
 chloroplast disintegration, of American vars. in India, 17798
 chromosome morph., 16181
 classification and grading, manual, 2963
 comp. of bark and roots, fertilizer as affecting, 13814
 crinkle leaf, soil factors, Louisiana, 1481
 culture under extreme conditions, Argentine, 6472
 damaged by *Astylus atomaculatus*, 6699
 delinting of seed, apparatus for use with H₂SO₄, 1189
 drying, (See *Bombax*; *Ceiba*; *Kapok*).
 false. (See *Bombax*; *Ceiba*; *Kapok*).
 fibers, behavior in cuprammonium sols., 3101, 8102, 3104
 cellulose orientation in, 17551
 length, relation to maturity, 8463
 tensile strength during develop., 17551
 floral biology and boll setting, 4841
 genetics of resistance to *Bact. malvacearum*, 16173
 insect pests, analysis of plat designs, 5028
 bollworm control, relation to profits, 5036
 climate, etc. as affecting, Brazil, 12192
 control by Ca. arsenate, properties as affecting, 5040
 by Na selenate, non-injury to plant, 12200
 field cricket control, Louisiana, 5027
 flea hopper, dispersal, 5029
 egg parasites, 12230
Gasterocercodes brasiliensis on, Brazil, 14116
 Hemiptera, Arizona, 10407
Horcuis nobilissus, S. Paulo, 12190
 inspection and control of *Pectinophora*, 5022
 in Italian Empire, 6696
 1936-37, Sao Paulo, 12198
 periodical cicada, 15902
Prodenia litura and *Thrips tabaci* on, infestation factors, 8183
 pruner (*Chalcodermus*) on, S. Amer., 10414
 sand wireworm control, 5041
 internal boll disease, Sao Paulo, insect carriers, 12198
 leaf pilosity and aphid population, 5023
 leaf structure, after x-radiation of seed, 14013
 lightning injury to, 1481
 -linters, sensitization of guinea pig to, 9837
 Mg in, as index of dolomite decomposition, 17607
 microclimate in irrigated field, India, 2931
 mycorrhizae of, 11945
 new nematode parasite in U. S., 16000
 origin, genetics, and tax., 6492
 regions producing, Mexico, 4824
 rootknot, comparative varietal injury, 1481
 rootrot (undet.), chem. comp. of host parts as affecting, 17824
 rootrot (*Phymatotrichum*), moisture and temp. as affecting, 10371
 progress reports, 1481
 rust (*Puccinia schedonardii*), Arizona, 15889
 Sea Island, damage and control of boll weevil, 5031
 seedling disease, *Corticium vagum* on, 14049
 thrips injury, effect on production, 10409
 tropical mite as affecting, S. Paulo, 12191
 unfavorable to grasshopper abundance, Ark., 17875
 variety tests, Ga., 15530
 water balance, dewfall as affecting, 4816

- Cotton (*continued*)
 wild, eradication, in control of
Pectinophora, 5022
 wilt (*Fusarium*), effect of soil moisture
 on virulence, 4996
 inoculation technic, 1481
 in soln. cultures, 3169
 pathogenicity of different strains,
 3169
 potash nutrition as affecting, 1481
 resistance, fertilizers as affecting,
 1481
 variability of strains, 3169
 varietal resistance tests, 1481
 yield, ecol. factors as affecting, 10752
 Cotton boll weevil, Mexican. (See
Anthonomus grandis.)
 Cotton bollworm, American. (See *Heliothis*
obsoleta (= *Chloridea obsoleta*), 1481
 pink. (See *Pectinophora gossypiella*;
 (= *Gelechia gossypiella*; *Platyedra*
g.))
 Cotton flea beetle. (See *Cotton flea hopper*;
Psallus seriatius.)
 Cotton flea hopper. (See *Psallus seriatius*.)
 Cotton greenbug, descr., Egypt, 5068
 Cotton leaf worm. (See *Alabama argillacea*.)
 Cotton moth. (See *Alabama argillacea*.)
 Cotton pruner, control, 10414
 Cotton root aphid, temp. as affecting,
 17874
 Cotton root rot. (See *Phymatotrichum*
omnivorum.)
 Cotton stainers. (See *Dysdercus* spp.)
 Cotton stemborer. (See *Sphenopieris*.)
 Cotton stem-weevil, parasites, 14266
 Cotton white fly. (See *Bemisia gossypip*
perda.)
 Cottonseed, allergenic fraction, nature,
 13490
 disinfection, 1481
 with H_2SO_4 , 17828
 germination problems, 1481
 hulls, for beef cattle, 777
 rupture during ginning, structure and,
 15561
 viability, delinting with H_2SO_4 as af-
 fecting, 13812
 factors affecting, 4825
 Cottonseed meal. (See also *Gossypol*.)
 as feed for cattle, 13355, 13356
 vit. A supplements, 16507
 in poultry ration, egg deterioration
 from, causes, 15118
 Cottontail rabbit, attacked by weasel,
 14312
 Cottonwood. (See also *Populus*.)
 chlorosis, control, 10379
Cottus (p.1880²), distr. in Lake Michigan,
 10620
cottus, muscle fibers, changes under
 influence of internal parasite,
 11428
tentaculatus, type locality, 3385
Coturnicops (p.1881²) *novboracensis*, breed-
 ing in Ontario, 18059
Coturnia (p.1881²) *coturnia*, incubating
 ♂, 5177
pectoralis, economic aspects of, 5186
 Cotyledon. (See *Embryo* (plant); *Embry-*
ogeny; *Seed*; *Seedling*.)
 Cotyledon (p.1865⁴) *buchholziana*, identity,
 6424
 Cotylophoron (p.1870²) *cotylophorum*, life
 history, 6781
 Cotylurus (p.1870²) *fabelliformis*, in ducks,
 1591
 Cough, codeine with morphine as affect-
 ing, 5751
 remedies, tested in pleuritis, cats, 5750
Coumarouna (p.1865⁴), revision, 2856
 Coumingine, effect on:
 chromatophores, toad, 5761
 electrocardiogram, 11285
 heart, frog and toad, 514
 Coupling. (See *Linkage*.)
 Courtship. (See *Mating behavior*.)
 Coussapoa (p.1865²), n. spp., 2827A
 Coussarea (p.1867³), n. sp., 6437
 Cover crop(s). (See also *Manures, green*;
 and under special plants.)
 for coconuts, New Guinea, 4875
 to control erosion on muck soil, 1238
 effect on soil erosion, 6496
 for lemon seedlings, 10216
 mustards as, California, 1260
 for orchards, to control erosion, 11988
 Zn absorption by, relation to white-bud
 of corn, 6481
 Cow(s). (See *Cattle, dairy*.)
 Cow pox. (See *Vaccinia*.)
 Cowbird, descr. and life history, book,
 8840
 Cowpea, ascorbic acid formation in, light
 as affecting, 3089
 beetles on, hibernating, 17866
 carotene in, vars. compared, weather-
 ing as affecting, 17731
 curculio overwintering on, population
 numbers, 17866
 disease resistance, breeding for, 17817
 infection with tobacco necrosis virus,
 3129
 mildew (*Erysiphe polygona*), host range,
 17813
 resistance, 17814
 pod spot (*Choanephora cucurbitarum*),
 17753
 sand wireworm control, 5041
 Cowpea curculio. (See *Chalcodermus*
aeneus.)
 Cowpers gland, sex hormones as affecting,
 rhesus monkey, 2438
 Coyote. (See also *Canis*.)
 food habits and ecology, 14426
 in Maine, 7038
 pegleg, food habits, 10826
 Crab(s). (See also *Crustacea*.)
 gregarines in intestine, 10518
 hermit, symbiosis with *Hydractinia* on
 snail shell, 15982
 packing and handling, health problems,
 15822
 Crab apples. (See under *Apples*.)
 Crab-eater seal, notes, 7049
 Cracidae (Aves), p.1881²
 Crackers, keeping quality improved by
 antioxidants, 15400
 Crambinae (Lepidoptera), p.1877²
Crambus, on tobacco, control, 5038, 14121
 Cranberry(ies). (See under *Vaccinium*.)
 Cranberry blunt-nosed leaf hopper. (See
Euscelis striatulus.)
 Cranberry leaf hopper, control, 6692
Crangon vulgare, parasitized by *Bopyrus*,
 resistance to dilution of sea
 water, 7186
 Cranial nerve(s). (See under *Nerves*.)
 Craniidae (Brachiopoda), p.1871²
 Craniometry. (See also *Anthropometry*;
Man; *Skull*.)
 adjustable cranial orientator, 15057
 of American Indians, 2464
 coordinate geometry in, 17013
 cranial indices, new charts, 17022
 of ♀ Ituri pygmy, 9721
 of human skulls from Iran, 2460
 location of nasion in the living, 15055
 of porion in the living, methods,
 15051
 of prehistoric skulls from cave at
 Dietersberg, 9748
 of Reihengraber skulls, 9744
 skull contours, methods of determining,
 17009
 Cranium. (See *Skull*.)
 Crapple, black, parasites, Florida, 15948
Craspedacusta (p.1869²) *marginata*, syn.,
 8725
ryderi, in Tennessee, 3276
soverbiti, distr., 8729
Craspedosoma (p.1873²), n. spp., 16014
Craspedosomidae (Myriopoda), p.1873²
Crassiphiala amboipitidis, in black bass,
 effect on weight, 1556
Crassula (p.1865⁴), tax., 2865
 6417, 10149
 Crassulaceae (Dicotyledones), p.1865⁴
 acid metabolism in, 15769
Crataegus. (See also *Hawthorn*.)
mexicana, uses, cultivation in France
 and French colonies, 11996
 Crayfish. (See also *Astacus*; *Cambarus*;
 etc.)
Cothurnia in gills, 8723
 electrocardiograph studies, 11201
 Cream. (See also *Butter*; *Butter fat*; *Dairy*
products; *Milk*.)
Achromobacter lipidis from, 2745
 bacterial distr. in, gravity or centrifuge
 cream separation as affecting,
 6284
 fat globule membrane, properties,
 17091
 keeping quality, separator cleaning
 methods and storage temp. as
 affecting, 17409
 loss in centrifuging, temp. effects,
 19376
 pasteurization, phosphatase test of
 efficiency, 13684
Pseudomonas mephitica in, skunk-like
 odor in butter due to, 6274
 ripening, factors affecting, 10067
 Creatine, in blood. (See under *Blood*.)
 creatinine metabolism, liver and, 845
 detn., in blood, 7288
 in muscle, 12725
 in nerve, muscle and brain, 2021
 in tissues, 16480
 distr. in tissues of rat, dog and
 monkey, 16475
 effect on liver glycogen, fasting rabbits,
 9198
 excretion, amino acids as affecting, rat,
 13007
 by dogfish, 9405
 vegetative nervous system and, 13021
 formation from ammonia in animals,
 7417
 metabolism, as influenced by:
 factors, 16476
 hormones, 9355
 methylating agents, rats, 9188
 in ocular tissues, 16358
 in urine. (See under *Urine*.)
 Creatinephosphate. (See *phosphocreatine*
 under *Phosphoric acid esters*.)
 Creatinine, in blood. (See under *Blood*.)
 in body fluids after inj., 7377
 clearance, urea clearance and, in neph-
 rosis, 2137
 conc. in heart in cardiac failure, 13117
 detn. in tissues, 16480
 distr. in tissues, 16475
 effect on renal blood flow and urinary
 output, 9400
 excretion, amino acids as affecting,
 rat, 13007
 basal metabolism and, 2019, 16826
 vegetative nervous system and, 18021
 in ocular tissues, 16353
 production by bacteria, precursors to,
 6305
 tubular excretion, 12643
 in urine. (See under *Urine*.)
 Creeping eruption. (See under *Dermatitis*.)
 Cremaster, as tax. criterion in Lepi-
 doptera, 3358
Cremastus cookii, parasite of *Ancylistis*
comptana, 1523
Crematogaster dohrnti, in beehives, pro-
 tection from, 14151
Cremolobus (p.1865²), n. sp., 2865
Cremosperma (p.1867²), n. sp., and n.
 combs, 2872
 Creodontia (Mammalia), p.1888²
Creontiades femoralis, damaging cotton,
 Ariz., 10407
 Creosotate, calcium, in tuberculosis, man,
 9546
 Creosote oil, as insecticide, skin injury
 due to, 12180
Crepis (p.1867⁴), apospory in, 14365
 chromosome structure and behavior,
 7099
 hybrids, morphology, geographical
 distribution, cytology, genetics,
 63
 monograph of American spp., 4777
 polyploidy, monograph, 4777
capillaris, effect on cells, of acenaph-
 thene, 16159
foetida, note, 1122
Crepusia (p.1875²), n. sp., 8785
 Cresol, dinitro-o-o, as dormant spray, for
 eggs (apple aphid), 12178
 for orchard pests, toxicity to eggs,
 preparation, 10470
 2676
 Cretinism. (See also *Thyroid gland*.)
 therapy with ant. pituitary extract,
 4291
 Cribariales (Myxomycetes), p.1861²
 Cricetidae (Mammalia), p.1882⁴
Cricetus. (See also *Hamster*.)
Cricetus (p.1882⁴). (See *Hamster*.)
auratus, *Mycobacterium* susceptibility,
 17297
cricetus, color variants, 12453
 Cricket greenhouse stone, control, 14114
 Mormon, control, 17888
Cricenomoides (p.1870²) *sphaerocephalum*,
 on cotton in U.S., 16000
 CRIDORSA (Pisc.) (p.1879²) moonta,
 12428
 Criminality, inheritance, 5359
 Crinoidea (Echinodermata), p.1871²
Crinum (p.1865²), n. sp., 6429
 behavior of "droplet sheath" in pollen
 tube, 8451
Crioceris (p.1876³) *asparagi*, in Utah,
 10411
Crithagra (p.1882⁴), n. subsp., 7023
Crocidema californica, in California,
 17997
 Crocin, effect on motility, algal cells,
 8600
 Crocodile, of Eugene, Utah, 5225
 fat body, development, 15067

- Crocus* (p.1865) *balansae*, *C. candidus* sub-
flavus, chromosome number and be-
havior,5288
Cronartium ribicola. (See also *Pine*, *white*,
blister rust.)
dist. in U. S. A.,1462
on *Pinus monticola*,8631
.....12125, 15797
resistance of currant to, 3137, 15887
resistance to, inheritance in Viking
currant,12145
susceptibility of *Ribes* spp. to, 15851
Crop(s). (See also *Cereals*; *Cover crops*;
Forage plants; *Fruits*; *Garden*;
Plants, cultivated; *Vegetables*; etc.;
and under special crops, e.g., *Apple*,
Wheat.)
analysis and varietal improvement,
Andropogon sorghum,73
apple, climate as affecting,8985
condition, effect on insect population,
.....1487
cross-fertilized, improvement by "strain
building,"10732
effect on soil comp.,8479
feed value, lignin content as affecting
and method of estimating, 15534
fertilizer as affecting,11955
forage. (See also *Feeds*; *Grasses*; *Graz-*
ing; *Hay*; *Legumes*; *Pasture*;
Range; etc.; and especially un-
der forage plants, e.g., *Alfalfa*.)
acre factor, relation to grazing and
method of measuring,4851
carotene in, detn.,1412, 13796
temp. as affecting loss,8456
consumption by steers,9801
cutting as affecting,4852
ensilage from, methods of making,
.....6478
evaluation, standardization of tech-
nic,1173
of Gt. Britain,11857
of India, grasses,10192
Melinis minutiflora as, Argentina,
.....15558
methods of curing,13352
minerals in, relation to those in soils,
.....17604
Opuntia inermis as,17599
root formation in, hormones as af-
fecting,10306
for Tenn., culture and value for hay,
.....1193
time of N application and rainfall as
affecting, Scotland,17590
water utilization, factors affecting,
.....1203
forecasting. (See *Climate*; *Rainfall*.)
history and weather, Western Canada,
.....8982
plants. (See also *Agronomy*.)
availability of Se forms for,10197
botany, book,8876
copper in, soil and fungicide content
as affecting,15405
grass as, management and value,
.....10181
Natal,10186
as influenced by:
 indoleacetic acid spray,13986
 lime,8455
 magnesium,15528
 silicates,4864
laboratory teaching,10201
morphology, book,1170
soil water optimum for,15537
water utilization, relation to agricul-
ture,4849
yields, available P and,15564
yield and protein content, N as
affecting,15569
production. (See detailed practices, e.g.,
Irrigation; and topics, e.g., *Fer-*
tilizer(s); also under special
crops.)
rotation. (See also *Fallowing*.)
for eastern Washington,10199
effect on:
 root insects, maize,17865
 sand wireworm, Gulf states,5041
 soils, water and nitrate content,
 8468
 for potatoes,4832, 4846
 for sugar beets,2954
truck, aphids on, control,17879
water relations. (See *Soils*; *Water, re-*
lations.)
yields, in relation to rainfall intensity,
Indiana,8990
Crop, of pigeon, fowl, etc. (See under
Stomach.)
Cropping, effect on nitrogen-fixing power
of soils,8345
Crossing. (See *Hybrids*; *Heterosis*; *In-*
breeding; etc.)
Crossing-over. (See also *Meiosis*; *Linkage*;
Chromosomes.)
between color-blindness and hemophilia,
.....1796
demonstration, in salivary chromosome
of *Drosophila virilis*,5297
enhanced, in 2nd chromosome, *Droso-*
phila ananassae,7151
mechanism, in *Drosophila*,5340
non-random, in 2nd chromosome of
Neurospora crassa,1751
in *Oenothera* hybrids,5330
between semihomologous chromosomes
in *Triticum-Haynaldia* hybrid,
.....7098
somatic discussion,8904
somatic translocations and, *Drosophila*,
.....7155
in transplanted ovary, *Drosophila*, 7154
ultraviolet as affecting, *Drosophila*, 5336
Crossosoma (p.1878), disease of silk-
worm, treatment of mulberry leaves
for,3232
sericariae, *Nomurea* parasitic on,3224
Crossopterygii (Pisces), p.1879¹
Crossothea (p.1864) *crepini*, microspore
structure,8369
Crotalaria (p.1865) *juncata*, as host of to-
bacco leaf curl virus,17738
photoperiodism in,15742
striata, phyllody in,4804
Crotalin. (See *Venom, snake*.)
Crotalus. (See also *Rattlesnake*.)
antivenins, polyvalent vs. monovalent,
.....17142, 17143
neutralization of *Bothrops* venoms by
antivenom,4467
cineurus, new lung mite from,17981
terreus, *Kalichephalus* from,14216
venom, regional variations in activity,
.....4160
Crotaphopeltis (p.1880) *hotamboeica*, n. sub-
sp.,10636
Croton bug. (See *Blattella germanica*.)
Croton californicus, *Pholisma* on roots, 4792
Crotonaldehyde, in tuberculosis therapy,
.....17257
Crotonic acid, absorption spectrum, 2069
betaine esters, pharm.,13182
Crotaphagi ani, habits,1674
Crow(s). (See also *Corvus*.)
Pasteurella bovispectica infection in, 6248
Crowding. (See also *aggregations* under
Communities; *Population*.)
biological effects in lower organisms,
.....9000
cannibalism in response to, lepidopteran
larvae,10766
effect on:
 Daphnia of Lake Nemi,14402
 duration of larval and pupal stages of
 Tribolium,16249
 reproduction, Protozoa,5103, 5104
 successive weed cover, Idaho,5385
Crown rust, of oats, resistant vars., 1205
Crown gall. (See also *Phytoplasma tume-*
factans; *Tumors* of plants.)
colchicine as affecting,6666, 14086
growth substance from, relation to
 pathogenicity,8169
host-parasite relations,10356
in pome fruit propagation, control,
.....10354
Cruciferae, clubroot (*Plasmodiophora bras-*
sicae), soil amendments as affect-
ing,3169
Delia on, life history and control, 5046
diseases, handbook,3167
roots affected by *Rhizidoderus*,15934
worm population of, Louisiana,5045
CRUCINYMPHA (Prot.) (p.1868) *hilli*,
from termite,12284
Crude drugs. (See *Drugs*, and under
specific drugs.)
Crupina (p.1867), n. sp.,8444
Crustacea (p.1873). (See also *Crabs*;
Lobsters; etc.)
antennal musculature,10577
biological effects of crowding,9000
cellular hormone,5778
chemical mediation in,18004, 18005
colonization of rocky shore by,12577
decapod, larvae of,1614
Entomostrea, transport of eggs, 17971
eye-stalk, hormone, effects on melano-
phore size and water uptake,
frog,12643
retinal pigment migration,14650
for food, packing and handling, health
problems,15322
innervation of legs,466
marine Decapod and Stomatopod, of
Portugal,17970
motor innervation, double,5702
and inhibitory, of legs,466
muscle, slow and fast contractions, 7697
pigmentary system, studies,442, 3935
sinus gland, effect on viability and
 ecdysis,14611
tegumental glands,9790
vertical migrations of deep water, 9041
Cryolite, for *Crambus caliginosellus* on
 tobacco,14121
chronic F poisoning from, effects, 5871
for cucumber beetle,17871
effect of particle-size on efficiency,
for *Heliothis* on lima beans,12239
injury to trees, prevention by MgO, 8640
residue on apples, removal,10394
toxicity,14111
Cryptantha (p.1865), n. sp.,1158
Cryptobranchidae (Amphibia), p.1880¹
Cryptobranchus (p.1880) *allegheniensis*, hy-
pophysis, morphogenesis,8035
Cryptocarenum (p.1876), position,6385
Cryptocarya microneura, *Fraserula* on, 8407
Cryptocarya (p.1865), n. sp.,6431
Cryptoccephalus (p.1876), n. spp.,3329
Cryptococcosis, etiology,14249
Cryptococcus (p.1863) *haematocoli*, sar-
comatosis due to,6205, 11644
haematophilus, in Schamberg's disease,
.....8249, 13620
hominis, growth, temp. as affecting,
.....15272
Cryptodesmidae (Myriopoda), p.1873¹
Cryptodidymosphaeria (p.1861), n. spp.,
.....17499
Cryptogams, of Mediterranean, ecology,
.....12603
CRYPTOGENE (Fungi) (p.1862),17500
CRYPTOGENELLA (Fungi) (p.1862),17500
Cryptoglaux (p.1881) *acacida*, behavior,
 nesting habits,5198
Cryptolabis (p.1877), n. sp.,14251
Cryptolithus (p.1874) *terryi* (O),3234
Cryptomeria japonica, chlorosis, occurrence
 of, in Japan,8622
Cryptomonadida (Protozoa), p.1868¹
Cryptomys capensis, *Ischnolaelaps* from,
.....17983
Cryptonemiales (Algae), p.1860⁴
Cryptopolizoon, reviewed,6820
Cryptorchidism. (See *Testis*.)
Cryptorhynchus lapathi, as vector of water-
mark disease of willow,6638
Cryptosporidia (p.1861), n. sp.,15453
Cryptotis (p.1882), populations in Texas,
.....5219
 floridana, nest of,5240
 parva, feeding habits,5222
 range of Virginia,5243
Cryptotoxin(s). (See *Toxins*.)
Crystals, in ameba,6760
grease, needle-shaped, in adiponecrosis
 subcutanea neonatorum,557
Crystalline lens. (See *Eye, lens*.)
Ctenidium (p.1863), n. spp.,2828A
Ctenium (p.1864), South African spp.,
.....13745
 aromaticum, *Dothichloe* on,13732
Ctenizidae (Arachnida), p.1874²
Ctenolepisma lineata var. *pilifera*, gregarine
 from,12287
 longicaudata, gregarines from,12287
Ctenophora, p.1869¹
Ctenopoda (Crustacea), p.1873¹
Ctenostomata (Bryozoa), p.1871⁴
Cubé. (See also *Tephrosia*.)
for aphids, dust vs. spray,17879
for pea aphid,17869
weathering as affecting,5079
Cubobolus (p.1873), synonym of
 Rhinoeriscus,5124
Cubocercus (p.1873), n. sp.,5124
Cubodesmus (p.1873), n. sp.,5124
Cuckoo. (See also *Cuculus*, *Coccyzus*, and
 other genera.)
 as migrants, So. Australia,5204
Cuculioidea (Coleoptera), p.1876²
Cuculidae (Aves), p.1881³
Cuculiformes (Aves), p.1881³
Cucullinae (Lepidoptera), p.1877¹
Cuculus (p.1881), (See also *Cuckoo*.)
 food habits,9064
Cucumariidae (Echinodermata), p.1872⁴
Cucumber. (See also *Cucumis sativus*.)
beetle control and insecticidal injury to
 plants,17871
breeding for resistance to downy
 mildew,66
fertilizers for,2983
growth and wilting, root temp. as af-
 fecting,1263

- infection with tobacco necrosis virus, 3129
- mildew (*Pseudoperonospora cubensis*),
host-parasite relations, 1449
- mosaic (virus), chem. separation from
tobacco mosaic, 3118
- immunol. reaction of strains, 17787
- in *Lilium longiflorum*, 3169
- mol. wt. of virus, 1444
- in peas, 3169
- in Puerto Rico, 14062
- seed dormancy, 14000
- spraying with insoluble Cu comps., 3161
- virus diseases, in Netherlands, 17789
- virus I, liliaceous hosts, 1434
- Cucumis* (p.1867³), tropisms in, relation to
auxin, 1358
- anguria, cell size and fruit size correla-
tions, 10171
- melo. (See also *Cantaloupe*; *Melon*;
Muskmelon.)
- in Egypt, vars. and subsp., 17629
- inheritance of new sex forms, 5326
- sativus*. (See also *Cucumber*.)
- heterosis in, 12529
- Cucurbita* (p.1867³). (See also *Pumpkin*.)
- pepo, cell size and fruit size correla-
tions, 10171
- Cucurbitaceae (Dicotyledones), p.1867³
- diseases, handbook, 3167
- in Egypt, book, 17629
- Cucurbits, dwarfing from Bordeaux spray,
..... 14093
- rootrot (*Pythium* spp.), 14040
- Culex* (p.1877³). (See also *Mosquitoes*.)
- Japanese epidemic encephalitis trans-
mitted by spp., 952
- in salt marsh, rel. to flora and
salinity, 12214
- trap records, 12221
- as vectors of filariasis, 15968
- bahamensis*, in Fla., 14140
- fatigans*, anal papillae in salt- and brack-
ish-water individuals, 6708
- filariasis and, 12249
- response to temp. and humidity, 6707
- salinity and pH tolerance, 6708
- pipiens autogenicus*, notes on, 8660
- development of filaria in, 10483
- hermaphroditic form, 6908
- as intern. host of frog filaria, 6721
- somatic multiplication and reduction
of chromosome groups, 3452
- as vector of *Plasmodium* to penguins,
..... 12265
- var. *pallens*, filariasis as affecting,
..... 8694
- tarsalis*, in Calif., 14138
- trivittatus*, as vector of filariasis, 12262
- Culicidae (Dipt.), p.1877³. (See also
Mosquitoes.)
- prophase chromosome behavior in cells
with multiple complexes, 53
- Culicoides*, attempted control by diking
and drying marsh, 12218
- sprays for, in house, 12217
- as vector of *Onchocerca gibsoni*, 6719
- oryzoma*, as vector of onchocerciasis,
..... 6719
- pungens*, as vector of onchocerciasis,
..... 6719
- Culm. (See *Grass(es)*; *Stem*.)
- Cultellus* (p.1872⁴), larva described, 3301
- Culter* (p.1879³), status, 3390
- CULTRICHTHYS** (Pisces) (p.1879³), 3390
- CULTROPS** (Pisces) (p.1879³), 3390
- Cultroribula* (p.1874⁴), n. spp., 17982
- Cultures, of Amoeba, crowding effects in,
..... 5104
- anaerobic, value of routine, 17351
- bacterial, aging, senescent phase,
mechanisms, 17471
- H₂O₂ detn. in, 11798
- preservation by freezing and drying,
..... 8154
- collection, of bacteria and molds, 1052
- of fungi, Centraalbureau, Holland,
..... 1081
- of *Colpoda*, factors affecting, 6772
- vs. counting, method, in detn. of rate of
strongyle egg production, 1543
- of *Euglena*, autotrophic strains, 10525
- methods, for amoeba, 12279
- Clegg's method, for acid-fast bac-
teria, 8258
- for *Leishmania*, 5085
- for refractory fungi, 17502
- single-cell, 6308
- for *Trichomonas vaginalis*, 12274
- for in vitro studies, *Strongylus*,
..... 15974, 15975
- solutions for. (See under *Nutrition*,
plant; *Salt solutions*.)
- tissue. (See *Tissue culture*.)
- tube, permanent label for, 15884
- Culture media. (See also *Bacteriological
technic*; *Culture technic*; *Chick*.)
- for acid-fast bacteria, Clegg's amoeba
method, 8258
- agar, concn. vs. bacterial growth, 8259
- introduction into bacteriology,
history, 13702
- amount, effect on bacterial growth,
..... 8366
- ascorbic acid in, for anaerobes, 17465
- oxidation, intestinal bacteria as
affecting, 13699
- for bacteria, book, 10092
- for bacterial counts of ice cream, 1042
- of milk, dye content, 6287
- bacterial populations in estimation by
dilution method, 17455, 17466
- for bacteriophage and general use, 2629
- blood, for *Brucella*, 17261
- liquid as affecting, 9991, 10001
- blood group-A substance in, non-inter-
ference with studies of hemolytic
strep., 17232
- cantharides blister, for detection of bac-
teria, fungi and parasites, 13625
- carbohydrate-rich, metabolism of patho-
genic bacteria in, 10082
- carbon in, effect on growth of micro-
organisms, 11801
- of *Neisseria*, 15415
- chitin-containing, for *Actinomyces*, 2774
- chocolate agar, 11661
- for chytrids, 17488
- for *Clostridium parabolium* A., 11793
- coconut milk in, 4707
- for contaminants in, biologicals, agar
concn. as affecting, 8259
- copper sulphate, effect on diphtheria
bacillus, 4615
- cyst formation in, factors affecting,
Colpoda, 17927
- differential, for *Clostridium welchii*,
..... 17356
- Na₂SO₄ in, 8273
- for coliform bacteria, 17457
- for colon-typhoid bacteria, 4664
- for diphtheria bacilli, 15280, 15281
- 15282, 17349
- for fecal pathogens, Endo + 3%
sucrose, 8275
- for pneumococci vs. streptococci,
..... 11657, 13627
- potato infusion for *Brucella* strains,
..... 8224
- for *Shigella* forms, 8294
- for *Streptococcus agalactiae*, 11781
- for typhoid-paratyphoid-enteritis bac-
teria, 8263
- for diphtheria bacillus, 8226
- blood agar for typing, 4628, 6202
- dissociative, for tubercle bacilli, 13700
- effect on:
- bacterial assimilation-respiration
ratio, 13692
- bacterial resistance to disinfectants,
..... 998
- comp. of acid-fast bacteria, 11791
- growth of frog cancer, 14894, 14895
- N fixation and pigmentation,
Azotobacter, 17422
- egg, for *Brucella* differentiation, 17445
- Eh detn. at different levels, 11673
- enrichment, for *Salmonellas* in meat
inspection, 4682
- fat-containing, for *Pityrosporum*, 17823
- for gonococci, 11654, 11661
- heterophile antigen production induced
in bacteria on, 11534
- hydrogen bisulphide in, silver foil as
indicator, 4664
- pH, effect on rate of reproduction,
Chilomonas, 177
- on serological reactions, 923
- isolation, for *Hemophilus ducreyi*, 2755
- for intestinal bacteria, 11634
- for *Neisseria* spp., 2755
- for recurrent-fever spirochaetes,
methylene blue taurocholate
as, 10004
- for *Salmonella*, 11658
- for *Shigella*, 17364
- for tubercle bacilli, 4624, 9999
- 13631, 13632
- for typhoid bacilli, 11658
- for leaf-spot fungi, 17495
- lecithin, effect on bacteria, 17305
- for legume nodule bacteria, 1046
- for *Leishmania* (Prot.), 13617
- 17912, 17928
- lithium-chloride, for *Pasteurella avicola*,
..... 13461
- liver, prep., 15279
- Culture media (*continued*)
- milk, for colon group of bacteria,
..... 10075
- N comps. in, use by marine bacteria,
..... 13707
- for non-exotoxic streptococci, 6182
- old, effect on rate of reproduction,
Chilomonas, 5103
- Paramecium*, 5102
- osmotic pressure, acclimatization of
ciliates and flagellates to, 7253
- for oxidation of sugar alcohols, 11771
- pectin in, effect on bacterial growth
and pH, 4663
- plasma, frog cancer growth in, 14895
- for *Proteus*, nicotinic acid in, 4712
- for refractory fungi, 17502
- for *Rickettsia*, Zinsser agar-tissue media,
..... 8215
- selective, for *Brucella abortus*, 6277-6283
- for *Streptococcus agalactiae*, 6277-6283
- for sewage analysis, 11796
- shake, pH detn. at different levels in,
..... 11673
- soil, moisture changes as affecting, 1047
- for soil microorganisms, 13690
- solid, starch substitute for agar in,
..... 4721
- suitability for anaerobes, 11673
- spinach-containing, for enteric bacteria,
..... 10076
- for staphylococci α -hemolysin pro-
duction, 4454, 4479
- for streptococci in nose and throat,
"double poured" plate, 8271
- for streptococci erythrogenic toxin
production, 17207
- synthetic, for diphtheria bacillus, 2770
- growth substances for, 4714
- for *Trichomonas*, 14166
- for *Trichomonas foetus*, chick embryo
as, 3267
- for trypanosomes, chick embryo as,
..... 15963
- for tubercle bacilli, blood and serum
in, 4711
- isolation and differentiation, 6231
- lipid growth factor in, 6298
- vs. other acid-fast bacilli, 4623
- use of papain in, 198
- for *Vibrio* el for toxin production, Teru-
uchi peptone broth, 13498
- vitamin B₁₂ in, 1082
- for water analysis, 996, 11796
- xylose in, effect on bacteria, 4713
- for yeasts and molds, molasses agar,
..... 9979
- Culture technic. (See also *Bacteriological
technic*; *Tissue culture*. In the main,
indexing appears under the names
of organisms, e.g., *Endamoeba*;
Mycobacterium; and under ingre-
dients, e.g., *Peptone*.)
- for chytrids (fungi), 15445
- Cumingia* (p.1872⁴), effects of centrifuga-
tion on polar spindles of eggs,
..... 12512
- eggs, permeability to water and
solutes, 16308
- tellinoides*, host for cercaria n. sp., 5109
- Cumpephilus principalis*, life history, 12437
- Cunninghamella* (p.1861²), new species,
..... 6354
- blakesleeana*, N and P nutrition, 17673
- Cunoniaceae (Dicotyledones), p.1865⁴
- Cupaniopsis* (p.1866³), n. sp., 6431
- Cuphea* (p.1866³) *balsamona*, anatomy and
biology, 1139
- Cupressinoxylon* (p.1864³) *lamarensis*, of
Yellowstone Park, 13715
- Cupressus* (p.1864³), n. sp. (N), 17475
- crown gall (*Phytomonas tumefaciens*),
..... 1482
- Corymeum* blight, control, 8514, 17831
- Cuprosal, in trichinosis therapy, 8713
- Curare, alkaloids similar to, sources, 4903
- anti- action of subthreshold catectro-
tonus, 9499
- botanical components, 10293
- effect on:
- central nervous system, 12643
- conditioned response, cat., 7618
- frog, 16641
- heat production of spinal cord, 464
- metrazol action on heat formation
in brain, 7760
- muscle-nerve response, 13074
- sensitivity of muscle fiber, 14752
- histamine liberation from muscle by,
..... 7674
- sources and physiol. action, 8558
- Curculio(s), cowpea. (See *Chalcodermus
aenus*.)
- plum. (See *Conotrachelus nenuphar*.)

- Curculionidae (Coleoptera), p.1876³
 Curculionoidea (Coleoptera), p.1876³
Curcuma zanthorrhiza, rhizome, drug standards for,3049
Curimatulus elegans, spawning induced by pituitary extracts,5895
 Curing, of hay, fertilizers as affecting,1209
 salt, of fish, mechanism,10056
 Curmarane chem.,12031
 Currant. (See also *Ribes*.)
 black, fertilizers for, effect on leaf spot,3008
 mosaic, new virosis,10359
 resistance to *Cronartium ribicola*, cytology,3137
 Viking, inheritance of resistance to *Cronartium*,12145
 Current(s). (See *Action currents*; *Air currents*; *Electric currents*; *Injury currents*.)
Curtia (p.1866⁴), floral morphology,2863
Curtisia (Platyh.), *foremanii*, meiosis,60
Curupira (p.1877²), n. sp.,3338
 Curvature, in plants. (See under *Movement*; *Tropisms*.)
 Curve(s). (See also *Frequency*.)
 bimodal, in trypanosome differentiation,8692
 frequency, hook,7169
Cuscuta (p.1867¹). (See also *Dodder*.)
 control in *Lepedeceae*,10366
 host-parasite relations,15817
 arvensis, on *Robinia* seedlings,15816
 reflexa, perennation of,17766
 Cushing's disease, simulated by arrhenoblastoma,14956
 Cut worm, on tomato, control,3189
Cuterebra apicalis, enemy of water rat,8459
 Outicle (plant). (See also *Epidermis* (plant); *Leaf*.)
 nature, in *Tradescantia*,7100
 Cuttings. (See under *Propagation*.)
 Cyanamides, in control of potato eelworm disease,1433
 of prune brown rot,10374, 17334
 leaf burn caused by, fruit trees,2991
 as soil disinfectant against *Heterodera schachtii*,1460
Cyananthus (p.1867²), review,6397
Cyanea (Dicot.) (p.1867²) *juddii*, reduced to var.,11897
Cyanea (Coel.) (p.1869²) *lamarecki*, nervous system, histology,17066
 Cyanides, as cause of pellagra-like effects of maize or cassava diets,13145
 in detn. of ascorbic acid,1960
 of peripheral circulation time,11202
 effect on:
 brain potentials,461
 disappearance-reaction of amino N in liver extracts,5825
 glycolysis of tumors,13231
 lactic acid in brain,5788
 oxidation of amines and amino acids,206
 Rickettsia of trachoma,2611
 xanthine oxidase activity,5463
 yeast O₂ consumption,12643
 as fumigant, for citrus scale control, S. Africa,17860
 for mushroom houses,5043
 hemoglobin reactions with,8620
 in linseed cake, removal,4403
 poisoning, diet as affecting,12784
 during fumigation,4170
 methylene blue and Na nitrite action in,13178
 thiosulfate plus Na nitrate as antidote,9549
 synergism with convulsants,5733
 hydrogen, absorption by tomatoes,10337
 for corn borer,10467
 detn., in fumigated citrus tissue,14103
 methods compared,10338
 effect on metabolism, *Scenedesmus*,14016
 on photosynthesis, *Scenedesmus*,15782
 in *Liriodendron* leaves,10288
 plants containing, preservation for chem. analysis,1316
 in plants, value of I test for,10285
 seed germination hindered by, *Vaccaria*,3080
 in sorghum, variety tests,10133
 in Sudan grass, factors affecting,1177
 toxicity to *Cimex lectularius*,10461
Cyanocitta cristata, blood parasites,3257
Haemoproetus from,3257
Plasmodium cathemerium transmitted to,3257
 Cyanol. (See *Aniline*.)
 Cyanophyceae, algal complement of lichens on mosses, Italy,13741
 N-fixation rôle in rice fields,11785
Cyanops (p.1881¹) *incognita* eura,10638
 Cyanosis, acro-, sleep and skin temp. children,11263
 in mitral stenosis, etiology,4058
 sulfanilamide causing, mechanism,15181
 met Hb in blood and,10941
Cyathea (p.1863¹), n. sp.,8421
 deckertii, in Rhodesia,8423
 Cyatheaaceae (Pteridophyta), p.1863¹
 Cycadaceae (Gymnospermae), p.1864¹
 Cycadales (Gymnospermae), p.1864¹
 Cycadofilicales (Gymnospermae), p.1864¹
 Cycadophyta (Gymnospermae), p.1864¹
Cycas (p.1864¹), Micronesian spp.,1111
 revoluta, structure and growth of shoot apex,11917
 Cyclamen mite, control,10416
 Cyclanthaceae (Monocotyledones), p.1864⁴
 Cyclanthales (Monocotyledones), p.1864⁴
Cyclanthera (p.1864⁴), length of satellite thread,12508
Cyclas formicarius, control of, on sweet potato seed,14115
 Cycle(s). (See also *Periodicity*.)
 terrestrial and extra terrestrial, recurrence of influenza and,14387
Cyclea (p.1865¹), n. spp.,2861, 15505
Cyclocypus (p.1868²), f. tax.,14198
Cyclodium (p.1863¹), status,4758
 Cyclohexanexhol. (See *Inositol*.)
 Cyclohexylamine, derivs., as insecticide for red spider and thrips,3187
Cyclotaelaps (p.1874⁴) *lophurumius*, from *Lophurumius*,17983
Cyclophorus (p.1863³), n. sp.,1097
 Cyclophyllidae (Platyhelminthes), p.1870³
 Cyclopidae (Crustacea), p.1873²
Cyclopides, n. spp.,8757
 Cyclopinidae (Crustacea), p.1873³
 Cyclopoida (Crustacea), p.1873²
 Cyclopropane, anesthesia, barbiturates as affecting heart in,13178
 brain potential during,12643
 effect on blood chem., dog,11220
 on heart rate, dog,11243, 11249
 premedication and,7797
 recovery sequence after,3981
 chlorine derivatives, anesthetic action,2306
 review,2331
Cyclops, as reservoir of *Dracunculus* larvae in springs,14181
 strenuus, vertical and diurnal migration,12616
 Cyclorhapha (Diptera), p.1874⁴
 Cyclosis. (See under *Protoplasm*.)
Cyclospora viviperae, in intestine of snake,12286
 Cyclospores (Algae), p.1860²
Cyclostigma (p.1863⁴), f. n. spp. (D), 10097
 Cyclostomata (Marsipobranchii), p.1878²
 Cyclotron, application in medicine,7319
 of Lawrence, descr.,199
Cydia (p.1877²) *nigricana*, on pea, life hist. and control,10405
 pomonella. (See *Carpocapsa pomonella*; *Codling moth*.)
Cygnus (p.1881²), trachea, type, taxonomic significance,705
Cygnus (p.1881²), food habits,9064
 columbianus, migration data,16088
 malanocoryphus, *Gastrolaenia* in,3281
Cylas formicarius,12187
 on sweet potato,12187
Cylicocercus (p.1870²), of horse, species characters,15997
Cylicodontophorus (p.1870²) *bicromatus*, morph.,15997
 Cylinropsyllidae (Crustacea), p.1873²
Cylindropermum (p.1860²), n. sp.,8385
Cylindrotania (p.1870²), tax.,6793
 Cymarin, cumulation,5772
 effect on chromatophores, toad,5761
 on heart, frog and toad,514
Cymatia (p.1875²) *bonedorffii*, association of non-homologous chromosomes, 1731
Cymbephallus (p.1869²) *japonicus*,6803
Cymbopogon (p.1864²), n. comb.,8427
Cymopolia (p.1860²) *edwardsi* (Ter),17482
Cynanthus (p.1881¹), food habits,9064
Cynara scolymus L., oxidase, hypoglycemic action,11246
Cynictis penicillata, *Nuttallia* from,1583
 Cynipoidea (Hymenoptera), p.1873²
 Cynognathidae (Reptilia), p.1880²
Cynolebias (p.1879²), n. sp.,8803
Cynomya (p.1878²), spp., maggot washings, antigenic and bactericidal quality of,12216
Cynomys (p.1882²). (See also *Prairie dog*.)
 fleas from,18036
 l. ludovicianus, in Canada,5252
Cynosurus (p.1864²), anomalous inflorescences,17514
Cyonodon casati (M.),12460
 Cyperaceae (Monocotyledones), p.1864²
 basic chromosome, number,17568
 chromosome numbers,7106
 pollen develop.,17568
 use in making paper,1194
Cyperus (p.1864²), spp. in California, 4770
 tax.,6390, 8426
 rotundus, control, with chloropierin,10188
Cyphon (p.1876²), n. sp.,3329
 Cyphonidae (Coleoptera), p.1876²
Cyphonicellus (p.1873⁴) *herzegowinensis*, redescribed, tax.,12336
 Cypriss. (See also *Cyprissus*; *Taxodium*.)
 Coryneum blight, hosts, dist., and infection conditions,4967
 Monterey, *Coryneum* injury to,3510
 pecky rot (*Fomes geotropus*),6632
 as windbreak, use in Calif.,3510
Cypricardia (p.1872²) *frilesensis* (J.),15943
 Cypridae (Crustacea), p.1873²
Cypridopsis (p.1873²) *spinifera*, in New Zealand,12320
 Cyprinidae (Pisces), p.1879²
Cyprinodon (p.1879²),6962, 8803
Cyprinodontes (Pisces), p.1879²
 Cyprinodontidae (Pisces), p.1879²
 Cyprinidae (p.1879²), classification, 1638
Cyprinus (p.1879²). (See also *Carp*.)
 carpio, digestive tube, histology,11425
 light absorptive power of various parts of eye,9463
 regeneration capacity,9675
Cypris (p.1873²) *balnearia* (*Heterocypris*), in Algeria, ecol.,16018
Cypselurus (p.1879²) *lutkeni*, syn.,3374
Cyppoptus (p.1875²), n. sp.,8785
Cyrtandra (p.1867²), n. sp.,6431
Cyrtomaja (p.1874²), tax.,1616
Cyrtomorphia (p.1877²) *flavicaucellaris*, of grasshoppers,6898
Cyrtopeltis varians, predator of *Protoparce*,5035
Cyrtostachys (p.1864²), n. spp.,11864
 Cyst(s). (See also *Cysticercus*; *Echinococcus*; *Hydatid*; *Rests*.)
 connective tissue, around nematode larvae, fish,10496
 paracecal, keratinized, mice,14878
 perinephric, review,4201
 perineurial, of spinal nerve roots, 16950
 pulmonary, physiopath.,369
 vitreous, congenital,5804
 Cysts (protozoan), amebic, passage through stomach, gastric juice as affecting,8712
 encystment, myxomycetes, temp. as affecting,1085
 excystation in *E. histolytica*, expl. studies,6757
 formation in *Colpoda*, environment and,17927
 recovery from feces, technic,3239
 cysteine, benzyl-L, racemization,14485
 decomp. in aqueous solution,16390
 effect on:
 animal tumors,575
 cathapsin in hepatoma, rat,4206
 gonadotropic hormones,14622
 phosphatase activity,9098
 spirochaetocidal activity,17245
 effects after thymectomy,389
 and d-homocysteine, optical inversion of benzyl derivatives in vivo,12803
 in liver, autonomic nervous system as affecting,4159
 metabolism in cystinuria,3677
 oxidative reactions,16380
 in red cells and urine, kidney overstrain and,16655
 rôle in taurocholic acid formation, 5539
 10976
 Cystinosuccinic acid, S-, chem.,5461
 Cysticercosis. (See also *Cysticercus*.)
 in athlete,6726
 in elk,5096
 Cysticercus. (See also *Cysticercosis*; *Taenia*.)
 hydatid disease in man diagnosed by rabbit antigen,17240
 crassicolis, antisera, absorbable and nonabsorbable properties in,4543

polysaccharide fraction, immunity rôle,13531
fasciolaris, chem. comp.,17910
 immunization trials,8171
tenuicollis, in liver and muscles, elk,5096
 in sheep, Sweden,5091
 Cystine. (See also *Homocystine*.)
 betaine of, metabolism,8702
 in blood globins of mammalia,14494
 cysteine, effect on respiration,3784
 in deaminized proteins,9123
 decomp. in sol.,295
 deficiency, effect on:
 genital development,9330
 growth, rodents,14530
 wound healing,14532
 derivatives in formation of taurocholic acid, dog,5539
 dibenzoyl-, availability for growth, rat,2024
 diecholy-, synthesis,5538
 in diet. (See under *Diet*.)
 1-diglycyl-, synthesis,7266
 effect on:
 blood and tissue glutathione,16408
 casein metabolism,2025
 growth, rat,3681
 kidney lesions, rat,12777
 lactation, rats,7406
 formation from methionine,12811
 liberation on tryptic digestion of casein, instability toward alkali and,12667
 in liver, autonomic nervous system as affecting,4159
 metabolism, in cystinuria,3676, 3677
 oxidation by liver protein, metals as affecting,7503
 oxidative reactions,16380
 preparation,14485
 in red cells and urine, kidney overstrain and,16655
 rôle in blood protein production,9155
 as supplement to lucerne for growth, rat,16449
 synthesis by rat,3675
 in urine. (See under *Urine*.)
 utilization of optical isomers of N,N-dimethyl-, rat,9189
 Cystinuria. (See under *Urine*.)
 Cystitis, in small animals, chemotherapy, sulfapyridine therapy,9931
 Cystolith(s). (See *Crystals*.)
Cystopus candidus, on radish, pathogenicity as affected by light,17822
Cystoseira, range extension,2788
barbata, polarity of eggs, as influenced by light,1386
 Cytheridae (Crustacea), p.1873¹
Cytherideis (p.1873¹) *baltica*, described,6845
Cytheropterion (p.1873¹) (E), n. spp.,8758
 Cytidyllic acid, hydrolysis by digestive secretions and tissue extracts, 12670
 Cytochrome. (See under *Pigments*.)
 Cytoclasia, in caecum of horse and organisms concerned,4671
 Cytogenetics, aim, review,8020
 plant, radiation and, review,8933
 Cytokinesis. (See *Cell Division*.)
 Cytology, bacterial,2773
 of *Drasophila ananassae*,1725
 examinations, smear prep. for,17339
 and genetics, review,10711
 history,19
 technic, book,36
 terms, origin and pronunciation, 10692
 use of Feulgen technic in,5265
 Cytolysis. (See *Autolysis*; *Bacteriolysis*; *Bacteriophage*.)
 Cytopenia, nutritional, monkey,311
Cytophaga, cellulose-decomposing spp.,1033
 Cytoplasm. (See also *Cell*; *Nucleoplasmic ratio*; *Protoplasm*; and under components, e.g., *Centrosome*, *Golgi apparatus*, *Mitochondria*, *Plastids*, *Vacuoles*, *Vacuome*.)
 of cells, hypo- and hyper-tonic solns. as affecting,2473
 components, in guinea pig ovum,1716
 Dandruff,2466
 oscillation, in production of cancer,18209
 plasmagel layer, rôle in contorted mitosis,16863
 of Volvocales,7116
 constancy, from study of plant hybrids,78
 ectoplasm-endoplasm vol. relation in *Actinosphaerium*,8917
 effect on hybrids of *Epilobium*,5310

inclusion bodies. (See *Inclusion bodies*.)
 in leaf cells, relation to respiration,4944
 plant, centrifugation as affecting, 8907
 time of influence, by genes,39
 Cytotaxonomy. (See also *Chromosome*, number, etc.; *Polyploidy*.)
 of *Calochortus*,8906
 in *Diapensiaceae*,8905

D

Dab, growth rate, in southern Baltic, 1867
Dacrydium (p.1864³), in Argentina, 15484
Dacrymyces (p.1863³), n. sp.,4784
Dacryomyces (p.1862³), n. sp.,4784
Dacryomycetaceae (Fungi), p.1862³
Dactylella bembicoides, culture, destruction of nematode larvae by,14172
Dactylaspis (p.1875⁴), n. sp.,10605
Dactylis glomerata, composition, changes during development,17595
 fertilizers for,1540
 pollen, antigenic relationships, by Dale test,15142
Dactylogyrus (p.1870³), tax.,6794, 17944
Dactylophoridae (Protozoa), p.1868⁴
Dactylosphaerium (p.1868⁴) *pellucidum* (Amoeba),3255
Dactylothea (p.1868⁴) *plumosa*, redescribed,8372
 sturti, fructifications, (Ob),15430
Daedalea (p.1862³), new species,6353
flavida, fringe-hyphae of hymenium,1073, 18486
gibbosa, spore ejection as affected by season,13728
quercina, spore ejection, season of,13728
unicolor, wood rots due to,3169
 Daffodil(s). (See *Narcissus*.)
 Daffodil bulb fly. (See *Merodon equestris*.)
 Dagenan. (See *Sulfapyridine*.)
 Dahlia, culture and vars., book,6519
 frozen, as indicators,10755
 spotted wilt (virus), in S. Africa, 6629
Dahlia. (See also under *Dahlia* above.)
 (p.1867⁴), origin of intercellular spaces in meristems,2908
 Dairy, bacteriology, trends,6288
 equipment, ultraviolet irradiation, 15402
 goat, disease problems,15869
 technology, phosphatase test in,1038
 utensils, cleaning methods, effect on keeping quality of cream, 17409
 electric water heater and sterilizer,1036
 sterilization,8074
 Dairy cattle. (See under *Cattle*.)
 Dairy products. (See also *Butter*; *Butter fat*; *Buttermilk*; *Cheese*; *Cream*; *Milk*; etc.)
 bacteriology, trends in,6288
 bound water in,6007
Brucella abortus in, behavior and isolation,6285
 keeping quality, propionate treatment of parchment paper container as affecting,17415
 paper containers for, sanitary condition,13652
 rancidity in, book,10051
 riboflavin and filtrate factor in,8082
 sanitation problems,17413
 scarlatina epidemic traced to,15315
 ultraviolet irradiation,15402
 Dale test, antigenic relationships of polylens shown by,15142
 Dallinger, William Henry, biography,16146
Dalmanella (p.1877⁴), key and n. sp., 6890
Dalysellidae (Platyhelminthes), p.1869⁴
Dama dama, distr. in Gt. Britain,16114
 Damping-off diseases. (See also under specific organisms.)
 in forest nurseries, control,3169
 of *Pinus* spp., as factor in natural dist.,10352
Rhizoctonia, control by bacterial antagonism,6293
 of seedlings, control by spraying, 3152
 Dandelion. (See *Taraxacum*.)
 Dandruff, *Pityrosporum ovale* from, cultural characters,17323
 Danforth, Stuart Taylor, biography, 16184
Danio malabaricus, breeding habits,12422
Danthonia (p.1864³), n. var.,1158
 Danysz phenomenon, in diphtheria toxin-antitoxin mixtures,6049
Daphnia (p.1873⁴), form changes of 2 spp., in Lake Nemi,14402
 longevity, abundant vs. restricted feeding as affecting,431

of mountain lakes of Yugoslavia and Albania,16016
 zoogeography,12819A
longispina, longevity vs. food supply,431
 magna, as affected by benzedrine and related compounds,14861
 aphrodisiacs and irritants as affecting,4163
 as bioassay test object,4162
 cathartics as affecting,4164
 growth studies,10994, 14553
 locomotion, *Veratrum* spp. as affecting,17670
 strychnine as affecting,4161
 pulex, eggs, intracellular oil, interfacial tension,10839
 phototropic behavior,2193
 Daphniidae (Crustacea), p.1873¹
 Dark adaptation. (See under *Vision*.)
 DARLINGTONIELLA (Diplop.) (p.1873³),5124
 Darnel. (See *Lolium*.)
 Dascilloidea (Coleoptera), p.1876²
Dasyellus (p.1880²), n. sp.,8815
Dasyatidae (Elasmobranchii), p.1879¹
Dasyatis (p.1879¹) *sabina*, invading Mississippi R.,3381
Dasycladaceae (Algae), p.1860²
Dasymetra (p.1870⁵) *provittellaria*, from snake,6784
Dasyms helukus helukus, *Ischnolaelaps* from,17983
Dasyrodidae (Mammalia), p.1882²
Dasyprocta agouti, expl. echinococcosis in,12248
Dasypterus (p.1882²) *floridanus*, food of,7038
Dasyus (p.1882²) *septemcinctus*, synonymy,18099
Dasytypha (p.1862³), n. combs.,11813
Dasyurus (p.1882²) *viverrinus*, meiosis, 1719
Datana (p.1877⁴) *perspicua mesillae*, metamorphosis,5141
 Date(s), spoilage during ripening, control by aeration,5000
 storage, temp., as affecting,1243
 Date palm, growth of fruit and leaves, water as affecting,13897
 petiolar cups, flora, Canary Is., 3517
Datisceae (Dicotyledones), p.1866³
Datura stramonium, adulterants of, use of palisade ratio in detecting,8564
 alkaloid content of various organs,6543
 extract of, preparation,1337
 flowers, as food for sphinx moths,5030
 as treatment for Parkinsonism, 8554
Daucus (p.1866³) *carota*. (See also *Carrot*.)
 anatomy of hypocotyl and root, 10167
 "Dauer wald," (See *Forest management*; *Silviculture*.)
Davainea proglottina, effect on weight, growing chickens,1560
 incidence in poultry,6749
 Davaineidae (Platyhelminthes), p.1870⁴
 ants as intermediate hosts,14160
 in man,14192
 Day blindness. (See under *Blindness*.)
 Daylight. (See *Light*; *Photoperiodism*.)
 Deafness, constitutional, estrogens as affecting,4285
 production in young animals by diet,3718
 Deamination, of adenine compounds by *Bact. coli*,296
 of alanine by kidney,9192
 of amino acids, reversible action of oxidized phenols in,2023
 of guanilic acid by kidney tissue, cholic acid as affecting,13022
 in Jensen sarcoma vs. muscle cells,13200
 Death. (See also *Autopsy*; *Cadavers*; *Senescence*.)
 bacterial logarithmic order in non-spore-formers,15292
 mechanisms,17471
 peroxidase in raw milk as affecting,6275
 blood creatinine after, as index of renal damage,1966
 certificates, value of data in health work,8284
 fetal and neonatal factors affecting,1112
 point, thermal, of bacteria from evaporated milk, growth temp. as affecting,2739
 of bacterial spores, factors affecting,2668
 rate. (See also *Longevity*.)
 age distr. of population and,11695
 age relations, in Batavia,10016

- Death (continued)
rate (continued)
by cancer, trends, 11702
children, malaria as affecting, Greece, 15965
enviromal relations, 10008
by heart diseases, trends, 11702
of infant, age of father as affecting, 16666
negroes vs. whites, U. S. A., 6210
malarial, in Panama, 12270
rural, comparative sex incidence, 2678
of sockeye salmon, 5403
from tuberculosis, climatic and socio-economic factors in, 10756
serologically demonstrable changes after, 814
sudden, acute interstitial myocarditis and, 14762
from sulfanilamide therapy, 11605
type, effect on histo-physics of aorta, 4082
of yeast cells, by devitrification, 1400
Death-feigning. (See under Defense reactions.)
Debaryomyces (p.1861³), species from pickle brines, 17405
globoseus, heat resistance, 15392
guilliermondii var. *nova zealandicus*, described, 2728
neoformans, ascogenous phase, 9978
pathogenicity and pathogenesis of strains compared, 9978
Decahydro- β -naphthol, metabolic fate, dog, 13140
Decapoda (Crustacea), p.1874²
Decemtestis (p.1869³), n. spp., 6803
Decerebration. (See Brain, cerebrum, ablation.)
Decholin. (See under Cholates.)
Decidua. (See Placenta.)
Dedifferentiation. (See Differentiation.)
Deer. (See also *Cervus* and other genera.)
attacking rattlesnake, 5230
browsing, effect on forest types in Adirondacks, 1300
erythrocytes, sickling phenomenon, 5881, 5886
gestation period, 124
healed bone fracture, 5913
lactation produced by ant. pituitary extracts, 9308
nutritional requirements, Arizona, 7243
parasites, Hawaii, 17916
peeling damage to spruce trees, 15677
red, behavior and life history, book, 3535
Defense. (See also Coloration, protective; Mimicry; etc.)
reactions, hemolymph node formation during, 4324
Deficiency disease. (See Diseases, deficiency and specific diseases, e.g., Beriberi, Rickets, Scurvy, Xerophthalmia; also Vitamins.)
Defoliation. (See Abscission; Leaf.)
Deforestation, of S. African soils, results, 13853
Degeeriella (p.1875²), spp. trans. to n. genus, 8797
Degeneration. (See also Necrosis.)
hypoglycemia and, 11305
produced by chlorinated lard, 11304
Wallerian. (See under Nerves.)
Deglutition, in fetus, 12643
Deg-Nala disease, of buffaloes, India, 17913
Degreasing tanks, trichlorethylene in, 15305
Degueline, as mosquito larvicide, from *Tephrosia*, Assam, 12223
Dehydration. (See Microscopical technic; Desiccation; Water, balance; Water, loss; Water, relations; etc.)
Dehydrogenation. (See Oxidation.)
Dehydroisocodaine, in tuberculosis, 2293
Deilephila euphorbiae, larvae, growth and metabolism, temp. as affecting, 12779
pupation hormone in brain, 3885
Delesseria sanguinea (L.) Lam., anticoagulant substance in, 4111
Delesseriae (Algae), p.1860⁴
Delia (p.1877⁴) brassicae, on crucifers, life history & control, 5046
Delosinus (p.1871³) (Cb), n. sp., 10555
Delomeristia (p.1878²), new species on hemlock sawfly, 18025
Delphax (p.1875³), taxonomic status, 18014
Delphinidae (Mammalia), p.1883²
Delphinine, from *Delphinium* seed, chem., 8560
Delphinium, yellows (virus), 17790
Delphinium (p.1865²), tax., 1158
6401, 11874
of Colorado-Wyoming, 10158
ajacis, phloem development and flowering, 10172
cardinal, color variation, 2847
staphisagria, seed extract, chemistry, 8560
Delta scale, life history and control, Tucuman, 17859
Deltocephalus (p.1875⁴), tax., 16038, 18016
Deltochilum (p.1876²), revision, 5134
Demansia textilis, venom, action, 5164
Dematiaceae (Fungi), p.1863¹
Dementia praecox. (See Psychoses.)
Demodex folliculorum, as affecting leather, 10440
Demonax (p.1871³), syn., 17962
Denaturation. (See also Coagulation.)
of Hb by urea, 10899
of proteins, effect on N content, 290
Dendraspis (p.1880⁴) *viridis*, bite, cobra serum therapy, 9880
venom of, 10633
Dendroaster (p.1872³), bilateral detn. factors affecting, 5972
cleavage, u.v. light as affecting, 766
Dendrobaena (p.1871⁴), n. sp., 6811
Dendrobium farneri var. *albiflorum*, culture, 8509
Dendrocaculus (p.1876⁴), n. spp. on *Cucurbita*, 6885
Dendrocoelidae (Platyhelminthes), p.1869¹
Dendroctonus (p.1876³), damage to forests, 12207
monticola, control in pine by injection of poisons, 14125
Dendrodochium (p.1863³), n. sp., 15453
Dendroica aestiva, *Trypanosoma* from, 2357
Dendrology. (See also Trees; Shrubs.)
text by Aldrovandi, 12496
Dendrometer. (See Forest, mensuration.)
Dendronephthya (p.1869³), n. sp., 3413
Dendrophilus (p.1876⁴) *sexstriatus*, 16029
Dendrophryniscus (p.1880⁴) *moreirae*, lack of sucker, in tadpole, 8820
Dendroterina (p.1870⁴) *nyctioracis*, in *Ameiurus*, 17943
DENISIELLA (Collem.) (p.1875¹), subg. of *Sminthurides*, 6943
Denisonia superba, venom, action, 875
5164
Denitrification, in organic manures, 15407
Densitometer, micro, descr., 12719
Density. (See Specific gravity.)
Dental caries. (See Teeth.)
Denticidae (Pisces), p.1880¹
Dentifrices, paste, antiseptic value, 4650
Dentine. (See under Teeth.)
Dentistry, biology and pathology of teeth, book, 4306
histology and embryology, book, 4307
internal medicine in, book, 4303
physiology, pathology, and therapeutics, book, 4305
Dentition. (See also Teeth.)
origin of human, 9787
of shrews, 5233
of vertebrate classes, book, 15039
Deodar. (See *Cedrus deodara*.)
Deperetia (p.1883⁴), replaced by *Bohlinella*, 7038
Deporaus tristis, leaf rolling habits, 10594
Derbe (p.1875³), n. sp., 8785
Derbesia (p.1860²), n. sp., 8382
Derbesiaceae (Algae), p.1860²
Derelomus (p.1876³), n. spp., 8769
Deretiodus (p.1876³) *hispidus*, 8779
Dermaceutor, acquired immunity to, 5065
intracellular microbe-like bodies in spp., 11623
as vector of nuttalliosis, 6756
andersoni, *Rickettsia*-like form from, and tissue culture, 4583
as vector of Rocky Mountain spotted fever, 11638, 11639
virus from, 4584, 4599
reticulatus, from pigs with piropilosis, 12246
variabilis, acquired immunity to, .9913
Dermatanyssidae (Arachnida), p.1874³
Dermatanyssus gallinae, invading houses, 10421
Dermaptera, p.1876⁴
as intermediate hosts of poultry nematode, 10478
Dermateaceae (Fungi), p.1862¹
Dermatitis. (See also Dermatoses; Erythema; Skin.)
allergic, 17187
blastomycotic, mouse infection by mycelial vs. yeast forms, 967
contact, spontaneous activation of negative sites in exptl., 15141
creeping eruption, due to sandworm, S. Africa, 15920
due to deficiency of pellagra-preventive factor and riboflavin, 4263
to insecticide, 15935
to *Pediculoides*, control, Bulgaria, 10445
to salvarsan, 17242
to *Schistosoma*, Fed. Malay States, 1544
to sulfonamide compounds, 15188
to trypanamide therapy, 4559
exfoliative, antuitrin as affecting, 9646
bromide in scales from, 3942
filarial, in domestic animals, Dutch E. Indies, 3245
herpetiformis, heterogenetic antibodies in, 846
occupational, patch test and, 17144
poison-ivy, serodiagnosis and serotherapy, 6031
progressive pigmentary, *Cryptococcus haematophilus* in, 13620
etiology, 8249
sensitization by simple chemicals in, 4516
S compounds in skin, man, 15034
Dermatocarpon (p.1861⁴) *spitsbergense*, 17504
Dermatoglyphics, in chimpanzee vs. man, 4371
of mongoloid imbeciles, 8014
Dermatology, allergy in, review, 15140
practical, syphilology and, book, .9074
Dermatomyel. in dermatophytosis vaccination, 4522
Dermatomycosis. (See Dermatoses; Mycoses.)
Dermatophyta (Fungi), p.1863³
Dermatophyte(s). (See also Dermatoses; Mycoses; and under genera, e.g., *Microporum*, *Monilia*.)
fungus, guinea pig susceptibility, 11647
growth, factors affecting, 972
immunol. relations in laboratory animals, 6203
inoculations in laboratory animals, 6203
stain technic, 8248
Dermatophytosis, convalescent serum therapy, 4522
serotherapy, methods compared, 1721
trichophytin therapy, 1721
vaccine therapy, 4522
Dermatoses. (See also Dermatitis; Mycoses; Skin; etc.)
acanthosis nigricans, stomach carcinoma and, 4226
acne, facial, intranasal pollen instillation inducing, 13439
in small animals, chemotherapy, 11601
vit. D vs. X-ray treatment, 14567
vulgaris, "S" factor in liver therapy, 14947
treated with testosterone, 3872
acrodynia, essential fatty acids and, rat, 5547
foods as affecting, rat, 16526
vit. B₆ and, 5557, 7468, 16924
adiponecrosis subcutanea neonatorum, case, 557
cutis verticis gyrata, a symptom of acromegaly, 2406
eczema, allergic, of infants, 4175
patch-testing for, 13474
body build and, 17004
check-up examinations, by patch tests, 17177
occupational, patch test and, 17144
salvarsan-induced, 17242
serum lipids, infants, 11264
erythema nodosum, tuberculous infection and, 2386
erythrasma, in negroes, Africa, 12256
heterogenetic antibodies in, 846
keloids, irradiation as affecting, 13202
liver function in, 5902
lupus erythematosus, acute disseminated, path., 9613
lupus vulgaris, in leprosy case, 11640
mange, effect on leather, 10440
in negroes, Africa, 12256
pemphigus, in Brazil, 17288
hypoproteinemia and, 4242
piedra, etiology, 4645
pinta, insects transmitting, 11633
Treponema carateum causing, 11633
premenstrual, sex hormones and, 9645
pruritis ani, causes, 8246
dermatological relations, 8246
psoriasis, therapy, review, 17277

Dermatoses (continued)

- scabies, therapy with benzoyl benzoate, 10436
in man, 15921
scleroderma, in infant, 605
pathol. changes in blood vessels, 630
tissue pressure and, 4095
skin distensibility in, 241
syphilitic, 4608
tinea, equine, cauterization for, 11731
of feet, mycoflora, 13623
immunol. relations in laboratory animals, 6203
in negroes, Africa, 12256
statistics in China, 9980
transfer from fox to man, 968
Trichophyton immergeans relations, 4643
vit. C in diseased skin, 337
xanthoma, heart diseases and, 2274
production in rabbits, 12643
xeroderma pigmentosum, *Cryptococcus haematocola* causing, 11844
Dermestes vulpinus, as interm. host of poultry nematode, 10478
mating system in wild population, 1779
Dermophyta. (See *Dermatophyte(s)*.)
Derogones (p.1869) *macrostoma*, 6808
Derotrois astragali, 6924
Derris. (See also *Rotenone*)
for aphids, dust vs. spray, 17879
Cebu, rotenone content, 17884
for citrus whitefly, oil emulsions as affecting, 14145
for corn borer, 17863, 17883
as fish poison, 17390
for gypsy moth control, 14134
for Jap. beetle on elm, 12236
patents for, 1911-38, 5076
for pea aphid, 17869
for pests of stored products, 6710
powder, for deep water treatment, destruction of yellow perch by, 12619
reviews and articles on, 5078
rotenone content, sensitivity of larvae to, weather and, 17885
for 6-spotted leafhopper, 12199
for thrips on flax, 14119
toxicity, animal studies, 14144
value and quantity, different sources compared, 12023
Derris (p.1865), insect pests of, 12238
elliptica and malaccensis, rotenone content and distinguishing characters, 3050
new compound from, chemistry, 6548
not in India, 10466
vars., high rotenone content, 12235
ferruginea, in Assam, 10466
Deschampsia (p.1864), polyploidy, relation to distribution and growth habits, 14345
flexuosa, culture solutions and pH for, 1353
Desensitization. (See also *Allergy*.)
for common cold, technic, 17184
effect on reinfection in allergic state after BCG-immunization, 8102
on tuberculosis resistance, 8102
non-specific, by histamine, 4448
to peptone, 13178
Desert, faunas, reptilian, of U. S., ecology, protective coloration, 18053
of Judaea, roots systems of plants, 10780
water economy of xerophytes, 12584
origin of flora in Central Asia, 1157
semi, vegetation of Morocco, 7192
9029
subsoil temps., root growth and, 8989
Desiccation. (See also *Drought*; *Evaporation*; *Humidity*; *Water, balance*; *Water, relations*.)
chemical, preservation of frozen biologicals by, 4507
microscope technic for studying, 3409
of seed, sugar changes during, 10313
of sweet potatoes, technic and vars. suitable for, 1178
of vegetables in storage, low temp. and, 13898
Desmanthodium (p.1867), n. sp., 13751
Desmidiaceae (Algae), p.1860². (See *Algae*.)
Desmodium (p.1865), n. spp., 2828A
Desmodus rotundus, rabies transmitted to livestock by, 9956
rufus, rabies transmitted to man by, 9956
Desmonema (p.1865), n. sp., 15483
Desmospongiae (Porifera), p.1869¹
Detergent, from Lauraceae, commercial possibilities, 12045

- Detoxification, of benzyl compounds, rabbit and rat, 9191
of intestinal bacteria, lecithin soap in, 4563
Deuterium oxide, effect on:
amylase action, barley, 8592
growth, *Chlorella*, 1375
mice, 5548
hydrolysis of acetylcholine, 7741
skin potential, frog, 3544
in fatty acids, prep., 1940
movement between intestinal lumen and blood, 3761
toxicity, 518
use as indicator in fat metabolism studies, 7505
Deutero-alcohol, anesthetic effect, 5759
Deutero ethyl ether, anesthetic action, *Daphnia*, 16780
Deuteromycetes (Fungi), p.1862⁴
Deuterophoma trachelipala, on lemons, control, 6627
Deutzia (p.1865), n. sp., 8426
Development. (See also *Cleavage*; *Differentiation*; *Egg*; *Embryo*; *Embryology*; *Gastrula*; *Gastrulation*; *Metamorphosis*; *Morphogenesis*; *Ontogeny*; etc.)
of abdominal stink glands, Hemiptera, 2476
absorption of minerals during, turtle, 12823
of after-feather, 699
of amphibian gastrula, oxidative metabolism during, 753
analysis by mitotic index, *Fundulus*, 5949
animal, concept, 2052
asexual, of *Plasmodium* spp., in birds, 8707
of atrio-ventricular valves, 17042
of auditory ossicles, opossum, 5951
of blood vessels of opossum's brain, 15071
chem. comp. during, *Lucilia* larvae, 286
chondriosomes of cells during, 8032
of columnar cells in mid-intestine of Jap. beetle, temp. as affecting, 8057
comparative, of molars in rats and rabbits, 5957
of connective tissue fibers, fetal pig, 15063
density changes during, temp. as affecting, frog, 4385
differentiation without cleavage in egg of zebra fish, 13326
of diploid hybrids (*Triton* x *Salamandra*), 11453
distr. of respiratory intensities during, *Ambystoma*, 4378
of dorsal rim of blastopore after retroversion, factors necessary for, *Rana*, 736
of duodenum, rotation in embryo, 8039
early, of *Aplysia*, 770
of chrysomelid beetle, 771
in *Citellus*, 4381
of stonefly, 9793
of endoderm elements in isopods, 9783
of eye in isopod, (*Idothea*), 9794
of fat body in crocodile, 15067
of fetal membranes and extraembryonic coelom, rat, 5950
of frog, 15070
film, 8034
of Gasserian ganglion in reptiles, 733
genetics, in interspecific crosses, *Epilobium*, 16176
note, 1741
of germ cells in rats and guinea pigs, 17038
from germ layers and blastemas of blastopore lips, 17040
of guinea pig ovum, delayed fertilization as affecting, 8043
of half eggs of *Chaetopterus*, 13343
of *Halsarica lobularis*, 9792
of hypoglossal nerve, man, 15066
of hypophysis, *Cryptobranchus*, 8035
as influenced by:
adrenalectomy, rat, 15025
diet, rat, 16465
environment, 8668
food level, *Drosophila*, 3462
gene "burnt", *Bombyx*, 17060
lethal deficiency, *Drosophila*, 7145
lysine and cystine deficiency in mother, *Rana*, 14530
temp., *Rana*, 747
karyokinesis during cleavage, zebra fish, 13327
of lateral thyroid, man, 15064
laws, 11446
of *Lebistes*, 11445

Development (continued)

- local reflexes during, factors conditioning, 11443
of lymphatics and associated lymphatics in anurans, 9686
of *Macracanthorhynchus*, 769
of mammalian diaphragm, 8037
of marine eggs, ultra violet light as affecting, 766
of *Melanophis*, changes in properties of activators of protyrosinase during, 17062
O₂ consumption during, factors affecting, 13342, 17063
metabolism during segmentation, gastrulation and neurulation, *Rana*, 9758
of mullerian ducts, sex hormones as affecting, 17048
of nasal cavity in birds, 4383, 4384
of nerve endings in human skin, 11393
of nervous system, fetal sheep, 17035
of neural crest, *Ambystoma*, 17036
in 10 somite human embryo, 17036
of neuromotor pattern, infant, 7616
of non-nucleate parts of echinoderm eggs, 767
normal stages in, identification, chick, 738
origin of P compounds in chick embryo, 5958
O₂ consumption during, *Bufo*, 8038
frog larvae, 866
of pelvis, man, factors affecting, 2452
of pituitary gland, domestic fowl, 4377
plant and animal, review, 12832
of pupal wings, *Ephestia*, 4401
of rectal columns, mammals, 11378
respiratory metabolism during larval and pupal, *Apis*, 13345
response of cortical layer of *Arbacia* egg to stimulation, 8059, 8060
rhythmic movements of pike's egg during, 15060
role of oenocytes and fat body during, *Melasma*, 13346
of sarcolemma of skeletal muscles, 11447
of sheath cells of Schwann, *Ambystoma*, 13324
of sympathetic nerve ganglia and sheath cells, chick, 8036
of *Tachyctes*, 768
of thymus, dog, 4379
man, 689
of 2 mutant strains, house mouse, 734
of umbilical cord and umbilical region of ant. abdominal wall, 17046
of *Urechis*, protein synthesis during, 17065
of uterine egg in vitro, mammals, 8048
Developmental mechanics. (See *Development*; *Embryo*; *Gradients*; *Growth*; *Morphogenesis*; *Polarity*; *Regeneration*; *Transplantation*; etc.)
Devitrification, of yeast cells, relation to mortality, 1400
Dew, effect on water balance, cotton, 4816
Dewberry (ies). (See *Rubus*.)
Dezomyophora (p.1878), n. sp., 6895
Dextran, bacterial production from sucrose, method, 6319
production by *Betabacterium vermiciforme*, 6302
Dextrose. (See *Glucose*.)
Dhal (p.1864), n. sp., 8427
Dhal, prep. from *Cajanus*, 8461
Diabetes. (See also *Blood, sugar*; *Insulin*; *Urine, sugar*.)
acidosis, cozymase in blood, 5841
administrative problem, 4272, 4287
antiketogenic activity of succinic acid in, 9650
arteriosclerosis in, carbohydrate-high fat-low diet as affecting, 269
relation to cholesterol metabolism, 489
study, 13101
in bearded women, adrenal tumor and, 9657
blood chronic index as test of glycolytic insufficiency in, 3625
blood glycolysis in, 5501
blood sugar in, factors affecting, 7430
low, medico-legal aspects, 14954
R. Q. and, insulin as affecting, 7896
caloric requirement in, 2017
carbohydrate metabolism, blood phosphates as affecting, 5852
coma, ketosis and acidosis as affecting, 4293
severity index, 11353
therapy with blood transfusions, 4267

Diabetes (continued)

- coronary atherosclerosis in,....14776
gastric anacidity in,....12881
glucose excretion by kidney in, dog,
.....2144
glucose in lacrimal gland in,....16488
hyperthyroidism and,....4274
as influenced by:
adrenal cortical extract,....12643
ant. pituitary,....3856, 16639
globin insulin,....5851
pituitary, adrenal and pancreas, dog
and toad,....3856, 3857
trauma, man,....3920
insipidus, blood sugar in, adrenalectomy
as affecting,....12643, 14965
denervation of pituitary without
polydipsia,....453
due to hypophysectomy, recovery,
rat,....397
hypophysis and,....12643
hypothalamic lesions and, dogs, 7895
as influenced by:
salts, post. hypophysectomized
rats,....9659
thyroid gland,....9660
water and salt ingestion,....14980
permanent in absence of pars
anterior,....2123
serum electrolytes and water ex-
change, pitressin as affect-
ing, cat,....12643
sodium Cl metabolism and,....11354
water intake as influenced by ol-
factory, gustatory and tri-
geminal nerves, dog,....9454
insulin antagonism,....7898
insulin requirements in, children, 1266
insulin therapy,....533, 2660, 2664
insulin and Zn in pancreas in,....359
lipocal deficiency in, bromsulphalein
liver function test as criterion,
.....3750
local lipid atrophy and dystrophy,
pancreatic (See also *Pancreas, ablation*.)
carbohydrate and fat metabolism in,
dog,....3683
phlorhizin, carbohydrate utilization in,
.....2128
pituitary x-ray treatment in,....10861
production by ant. pituitary extract,
.....5618, 12643
protamine-Zn insulin and, depancrea-
tized dog,....14962
resistance to insulin and,....14958
.....14976
relation to pregnancy and heredity,
.....4282
renal, corticosterone and riboflavin as
affecting,....529
renal glycosuria and,....7899
retinitis and, sex-incidence, etiology,
.....5856
therapy, by ordinary+protamine in-
sulin,....2655
protamine insulin,....545, 2660
.....2664, 4290
in twins,....1801, 10743
urinary hormone detn.,....12721
urine, effect on carbohydrate metab-
olism,....11064, 11065
hyperglycemic principle, rabbit, 9637
volatile reducing substances in blood
and,....9631
DIABOLIGENUS (Col.) (p.1876) *primus*,
.....6867
Diabrotica (p.1876), spp. on maize, as
affected by crop rotation,....17865
12-punctata, hibernation and control of,
.....17866
vittata, control,....17871
Diaceratherium (p.1883), genus redefined,
.....5246
Diacetic acid. (See *Acetoacetic acid*.)
Diacetyl, toxicity,....4181
Diacetyl in butter manufacturing, changes
in content,....8085
from citric acid in butter,....8084
odor of "*Sarcina*"-infected beer due
to,....8336
Diacetylaminodiphenylsulfone, in coecal
infections, mice,....2299
Diachorella (p.1862), n. sp.,....17498
Diacyclops (p.1873) *crassicauda*, in mos-
quito pool,....3202
Diacylurea, hypnotic action,....13178
Diadastia (p.1878), species of *australis*
group,....18024
Diademopsis (p.1872) *falloti* (Tr.), figured,
.....16007
Diaretus (p.1878) *rapae*, parasite of
aphid,....10451
Dialeurodes citri, control,....12181, 14145
- Dialysis. (See *Diffusion; Electrolysis;*
Membrane; Permeability; Ultrafiltra-
tion.)
Diamanus montanus, as vector of plague,
control,....1004
3-6-Diaminocholestan, pharm.,....7805
Dianthus (p.1865), n. sp.,....8444
caryophyllus. (See *Carnation*.)
Diapause, in *Diprion*, weather and genetic
factors as affecting,....14123
in *Lucilia*,....5060
Diapensia (p.1866) *lapponica*, chromosomes
and phylogeny,....8905
Diapensiaceae (Dicotyledones), p.1866
chromosomes and phylogeny,....8905
Diaphanosoma (p.1873), race differentia-
tion,....12319A
Diaphorodesmus, tax.,....8748
Diaphorus (p.1877), n. sp.,....14256
Diaphragm, barbitol and coal-tar anal-
gesics as affecting,....7779
contraction, crossed, study,....460
development, in mammals,....8037
movements, effect on angina pectoris,
.....490
registration,....229
paralysis of 1 side, respiration and,
.....13309
relation to pericardial sac in mammals,
.....7930
rhabdomyosarcoma, path.,....16876
trichina in, Chicago,....6737
incidence,....5092
post mortem exam.,....1551
tumor,....16876
Diaprepes, egg masses, on citrus,....14108
as factor in root disease of lime, 14038
Diapriidae (Crustacea), p.1873
Diaptomus (p.1873), synonymy,....6842
.....6844, 10568
Diarmostorckia (p.1870), syn.,....6788
Diarrhea. (See also *Dysentery; Enteritis*.)
acute, dysentery and, children,....17864
media for *Shigella* isolation,....8294
parasitology,....17914
bacillary white. (See *Salmonella*
pullorum.)
carriers, detection,....8294
etiol. and epidemiol.,....2669
in infants, infectious, etiol.,....7816
value of apple in,....2003
meadow, on sandy ground of drained
marshes,....15386
Shigella dysenteriae in outbreak in
children,....2645
Diasia (p.1870) *podilymbi*, a correction,
.....10543
Diastodius (p.1875), n. sp.,....10605
Diastore, definition,....7208
Diastase. (See *amylase* under *Enzymes*.)
Diastole (p.1872), n. sp.,....5114
Diathermy. (See also *Fener*.)
effect on adrenal function,....7279
on trichina larvae,....10506
temp. rise, wave length as affecting,
.....12700
theory and applications, book,....12702
transpancreatic, effect on blood sugar
and glucose tolerance, dog,
.....14509
Diathesis, alimentary exudative, vit. E
as affecting,....16546
Diatom(s), p.1860. (See also *Algae;*
Plankton.)
Arcella feeding on,....12282
of Brazil,....13723
epiphytic in German lakes,....9047
fossils, Litorina sea and Aestee, Finland,
.....2782
growth, in relation to copepod produc-
tion,....9040
S and Mn as affecting,....12077
of hot springs, Iceland,....7227
P absorption and metabolism, N as
affecting,....13975
Pleistocene, from New York,....8371
recent and fossil, culture methods and
ecology,....9022
of Wisconsin lakes,....7231
Diatomaceae (Algae), p.1860
Diatomaceous earth. (See *Infusorial earth*.)
Diatraea (p.1877) *saccharalis*, biological
control of, P. R.,....8669
biol. control in British Guiana, 15925
parasitized by *Propharus*,....10459
Diatripe (p.1861), n. sp.,....17499
ribis, on *Ribes* twigs,....15795
Diatripella (p.1861), n. sp.,....17499
Diazo reaction, in reticulo-endothelial sys-
tem disease,....5840
Diazomethane, sensitization to,....873
Dibenzanthracene, carcinogenic effect,
mice,....11294, 11295
structure and chem. reactivity, 2855
- compounds, effect on:
cultures of fibroblasts,....611
development of lymphosarcoma,
mice,....590
growth of tumors, mice and rats,
.....584, 585
rapid production of tumors,....568
polarographic curve,....13233
effect on amphibia,....11284
on growth, *Fusarium lini*,....15727
filterability of tumors produced by,
.....7842
metabolism in lower animals,....16847
in production of lung tumors, mice,
.....14896, 16830, 16831
of pituitary adenoma,....16877
Dibenzanthranil-carbamido-casein, in im-
munity to tumor production, 16852
Dibenzoylcystine, availability for growth,
rat,....2024
Dibenzphenazine-1,2,5,6-, effect on growth
of tumors in mice,....584
Dibothriocephalus. (See *Bothriocephalus;*
Diphyllobothrium.)
Dibrachys (p.1878) *cavus*, biology list of
hosts,....14268
larvae similar to *Schizonotus sieboldi*,
.....10447
Dibranchia (Mollusca), p.1872
Dicarboxylic acids, glycogen formation
from,....299
DICEA (p.1882) *lepuscula* (N),....14911
Diceratella (p.1865) *saharina*,....15511
Dicerca (p.1876) *hesperoborealis*,....8768
Diceros (p.1883) *bicornis*, skulls, subsp.
characters,....10663
Dichelostemma (p.1865), defined,....6386
β-Dichlorodiethylsulphide, effect on im-
munological properties of proteins,
.....8098
pharm. and toxicity, rabbit,....11217
Dichloroethyl ether, as fumigant, for Japa-
nese beetle, larvae,....17887
Dichlorophenolindophenol, in blood glucose
detn.,....7287
effect on cancer tissue,....11298
Dichogamy, in avocados, vars. compared,
.....1249
Dicholycystine, synthesis,....5538
Dick test. (See also *Streptococcus* spp.;
Scarlatina.)
reliability compared to Schick test,
.....4471
toxins, potency,....4471
Dickkera (p.1867), n. sp.,....6437
Dicotyledones, p.1865
Dicranaceae (Bryophyta), p.1863
Dicranograptus (p.1869) *caparoensis*,
.....3234
Dicranophora (p.1861), new species, 6354
Dicranophorus (p.1871), n. spp.,....6806
.....6807
Dicranopteris (p.1863), n. sp.,....4757
Dicranoweisia (p.1863) *nordenskioldii*,
transf. from *Hymenoloma*,....11844
Dicrocoelidae (Platyhelminthes), p.1869
Dicrocoelium (p.1869) *lanceatum*, asso-
ciation with carcinoma of the liver,
.....2362
liver lesions, ruminants and swine,
.....12260
path of infection, exptl. studies,
.....14183
in sheep,....5091
Dicrostonyx (p.1882), teeth and bones of
Swiss (Pl) and Greenland spp.,
.....10667
Dicuridae (Aves), p.1881
Dicurus (p.1881) *bracteatus*, described,
.....7022
Diutamnia sp. (p.1876), on cocoa, 14107
Dictionary(ies) of agriculture, biology
and physical sciences, German-
English,....14335
of foreign words and phrases, 13195
Dictya (p.1877), n. spp.,....12375, 14257
Dictyocaulus flaria, in sheep,....5091
Dictyoconus *walnutensis*, (K),....17925
Dictyopeltis (p.1861), n. spp.,....17498
Dictyosomes. (See *Golgi apparatus*.)
Dictyosteliaceae (Myxomycetes), p.1861
Dictyostelium (p.1861) *discoideum*, growth
and development in culture, 6362
Dictyuchus (p.1861), spp. parasitic to fish,
.....15467
Dicynanin-A, in sensitization of bacteria
to light,....15420
Dicynandiamide, ammonification of deriva-
tives and, in soils,....17430
fertilizing value,....4844, 17430
Dicymidae (Mesozoa), p.1870

Didelphiidae (Mammalia), p.1882¹
Didelphis (p.1882¹). (See also *Opossum*.)
azarae, genital tract, ovarian hormones and gonadotropic substances as affecting,7969
virginiana, auditory ossicles, development,5951
coccidian parasite,3270
gas transported by blood,1985
in New York, winter behavior,5219
Physaloptera from,17954
range and abundance,14812
reproductive system, castration and gonadotropic hormones as affecting,16992
retina, anatomy,2425
sex differentiation, female sex hormone as affecting,11409
testosterone as affecting,11407
in Vermont,5219
Virginiana, *Spirocerca* from,14213
Didinium (p.1868³) *nasutum*, excretory apparatus,6765
Didymaea (p.1867⁹), n. sp.,6437
Didymiaceae (Myxomycetes), p.1861³
Didymium (p.1861²) *intermedium*, redescribed from Panama,4743
nigripes, electric potential of plasmidium, heteroauxin as affecting,15718
parietale,1084
squamulosum, flagellum structure in,1586
Didymodon (p.1863²), n. combs. and n. sp.,4748
Didymopsis (p.1862⁴), n. spp.,17500
Dieffenbachia (p.1864⁵), n. spp.,28274
picta, bacterial leaf spot of,3169
Dialectolysis. (See also *Cataphoresis*.)
effect on regenerating respiratory epithelium in epidemic influenza,627
in treatment of corneal dystrophy, 3550
of thrombophlebitis,11200
DIEMOIDES (Homopt.), (p.1875⁵),18016
Diencephalon. (See *Brain diencephalon*;
and specific parts, e.g., *geniculate bodies* and *thalamus* under *Brain*.)
Dientamoeba (p.1868³) *fragilis*, incidence, Saskatchewan,17905
nuclear division in,5105
Diet. (See also *Energy*; *Feeds*; *Foods*; *Nutrition*; *Vitamins*; and specific diet supplements, e.g., *Cod liver oil*.)
acid vs. alkaline, effect on infectious abortion in cows,4677
on lymph tissue,1967
acidity and alkalinity in, pigs,5994
adequate, definition,12789
Al requirement in, man,9176
for amphibian larvae,2009
in *Ascaris* infection expts., monkey,15946
Aspergillus in, toxicity and correction,272
bananas in, effect on growth, children,16824
on intestinal flora and on constipation,3768
beef muscle serum, and casein in, effect on blood albumin regeneration,1999
blacktongue-producing, deficiencies in, rat,9228
dog,3726
books,4655, 7403
brachycardia, dog,12643
Ca in, added to soy bean sauce,16460
calculated vs. determined,16455
effect on blood comp.,14548
in white bread,16461
Ca deficient, grit requirements and granivorous birds,5423
Ca and P in, effect on Ca/P balance and on body comp., rat,12643
on toxicity and storage of Pb and As, rat,3701
carbohydrate and fat, effect on capacity for work, man,10965
carbohydrate-high, fat-low, effect on arteriosclerosis in diabetes,269
in pregnancy,9432
choline-low, effect on kidney,12777
effects, rat,12817
complementary feedings, infants,563
composition, effect on toxicity of S, rat16456, 16457, 16458
cystine in, replaceability by S containing amino acids, rat,16477
deficient, ariboflavinosis due to, 14949
cytopenia due to, monkey,311
deafness due to, vit. A as affecting,3718
Dutch E. Indies,316

Diet (continued)
deficient (continued)
effect on rats,2049
in muscle degeneration, guinea pig,9623
nervous system lesions and,2004
relation to anemia of laborers on tea estates,11320
reticulocyte count and, rat,2005
dental caries and,8307
dental disease and, ancient Andean Indians,13318
in diabetes. (See under *Diabetes*.)
dry wt. of feces and,2013
effect on:
acid soluble P in muscle, rat,2263
adrenalin action, dog,14521
anesthetic action of hypnotics, 4121
arginase action in body,12877
bile, fox,12895
blood cholesterol,4243
Ca oxalate stones in urinary tract,10992
childhood asthma,13191
density of tissues,12790
dental caries incidence,15380
rat,16464
egg comp., chicken,2311
exptl. renal hypertension,503
glyconeogenesis,9197
growth and pellagrous dermatitis, rat,16924
Hb conc. in mice,249
intestinal flora,4700, 8148
intestinal pH and bacterial flora,2112
ketonaemia in pregnant ewes,3698
lactation, rat,7400
lesions in nephrotoxic nephritis,11092
nutritional encephalomalacia in chickens,2403
nutritional muscular dystrophy, rabbit,9218
oxalic acid excretion, rabbit,12826
oxidation in body, dog,9161
periodontal conditions,16462
plasma proteins in trypanosomiasis,1552
poisoning by phenol and cyanide,12784
pneumonitis in laboratory animals,2521
rate of depletion of hepatic vit. A,3716
resistance to diphtherial toxin, rat,12785
to O₂ want,2007
saliva comp.,3751
sedimentation rate, guinea pig, 11324
serol. and sero-cytol. phenomena,8148
susceptibility of liver to CCl₄ damage,9255
toxicity of Se,16812
tropical ulcers,5847
tumors experimentally induced,2361, 14874, 16835
urea synthesis,13016
English, economic levels as affecting,265
excessive, and cancer, book,13220
fat in, body fat and, pig,10986
effect on:
blood cholesterol,1996
thiamine requirement, dog, 12837
thyroid,268
protein utilization and,2492
fat free, effect on rat,5546, 5547
fat high, carbohydrate high, fat synthesis from, rat,10987
fed by stomach tube after hypophysectomy,14520
containing gliadin, effect on fatty livers, rat,3700
in vit. B₁ deficiency,11012
fat low, effects, man,7436
growth and reproduction on, rat,16501
fat and carbohydrate in, effect on uric acid excretion, man,9187
ferrous vs. ferric Fe in,9178
fish in, man,3660
flavone-free, production,312
glucose high vs. fructose high, effect on body wt. and comp., rat,9193
.....10983
golter producing, rat,10959
goitrogenic and rachitogenic, effect on ant.-pituitary, rat,3873
grass juice factor in, guinea pig, 7463
hard and soft, effect on gingiva, dog,16452
heptaldehyde in, tumor growth and, 570

Diet (continued)
improvement in Dutch East Indies,10950
insulin in pancreas and,12643
in lead poisoning,2033
lipids in, effect on vit. C synthesis and excretion, rat,16531, 16533
liver in. (See *Liver, extracts*.)
low cost, for groups,12791
N, Ca and P balances of adolescent Chinese boys on,2010
Mg in, effect on blood comp.,14548
Mg-deficient, effect on enamel epithelium,13265
maize and cassava, path. due to cyanides in,13145
Mn deficient, effect on growth, tapeworm-infested chickens,17898
minerals in, effect on comp. of blood, pig,14548
mineral deficient, dental caries and,16544
effect on vit. D assay,16538
minimum requirement, China,12792
man,9175
nicotinic acid requirement, dog and rat,7475
oxalates in, effect on Ca balance, 16459
pellagra-producing, effect on herbivora,9232
with retrobulbar neuritis, Nigeria,13270
in pellagra therapy,11345
P in, availability in Indian foods, 5524
effect on blood comp.,14548
hyperparathyroidism due to, rabbit,7535
P deficient, effect on young rats, 16445
planning,12783
"poor Madrassi", carotene assimilation from, milk and Ca as affecting,315
potassium deficient, effect on muscle and liver electrolytes, rat,14745
proteins in, in animal nutrition,11474
effect on:
basal metabolism, in normal and thyroid states,4277
rat,10964
body wt. of meat birds,793
egg production, fowl,6013
egg wt. and body wt., fowl,788
growth, activity and comp., rats,10951
fowl,6014
liver size and arginase, rat, 12896
liver storage of protein, rat,9264
regeneration of serum albumen,1998, 1999
sex ratio, rat,7589
successive generations, rat,16465
total energy metabolism,10963
utilization of food, rat,16446
egg replacement value of cereal break-fast foods, heat injury and,10947
of fishery products, value,2011
in Hb production, in anemia,4247
level, for beef calves,2486
effect on growth, chick,15111
for pigs,11477
relation to growth of turkey, 2507
poultry requirements,8095
in pregnancy, anemia and,14676
specific dynamic action and, rat,10952
supplementary effect of plant proteins, rat,16449
protein high, use with protamine Zn insulin,2030
protein-low, amino acids as affecting N balance in,14531
effect on:
metabolism of amino acids, 12808
of N, Ca and P, women,3520
raccoon,5664
tuberculosis,2378
protein-medium, N, Ca and P metabolism on, women,5522
rachitogenic, deser,11023
oxalate as affecting, rat,12860
phytin and fats as affecting,10955
raw apple, effect on intestinal bacteria, monkey,7399
restricted, effect on growth, life span, body size and age changes, rat,14554
.....14939
on thyroid and pituitary,14939
in rickets. (See under *Rickets*.)
role in etiology of obesity,14961
roughage in, effect on Ca balance, rat,9162
salt low, in chronic nephritis,2148
scurbutic, effect on monkey,7490
size of family and,262

- Diet (*continued*)
 sodium and K-low, effect on electrolyte excretion, rat, 7246
 sucrose in, effect on depot fat, rat, 12821
 survey, Batavia, Java, 14519
 in Edmonton, Alberta, 10957
 of families of employed wage earners, 5527
 with leprosy, 10948
 in low income, Toronto, 10954
 in Najafgarh, Delhi Province, 10960
 in Nilgiris and Travancore, India, 10958
 in Peking, 260
 in Rio de Janeiro, 13638
 synthetic, effect on metabolism, rat, 9230
 thyroid in. (See *Thyroid, feeding*.)
 toxicity of S in, factors affecting, rat, 16456, 16457, 16458
 trace elements in, history, 8893
 for trout, furunculosis and, 5409
 valine as essential in, 7405
 vegetarian, effect on respiration of rat organs, 14522
 vit. A deficient, 2499
 vit. C deficient, fatty livers and guinea pigs, 12858
 vit.-low, minerals and, rat, 12787
 wheat-and-milk, meat and green vegetables added to, effects, rats, 2006
- Diethylaminoethoxy-2-diphenyl phar., 13141, 13142
 Diethylaminomethyl-3-benzodioxane. (See *Benzodioxane, diethylaminomethyl-3-*.)
 Diethylene glycol, toxicity, 14862
 Diethylmalonylurea. (See *Barbitol*.)
 Diethylmethylaminobenzodioxane. (See under *Benzodioxane*.)
 Diethylstilboestrol. (See *Estrogens*.)
 Differentiation, of cells in phloem, 15517
 of early chick blastoderm in vitro, 757
 in growing region of grass roots, differential growth rates and changing cell relationships, 17560
 at stem apex of seed plants, review, 17557
- Diffusing factors, prep. and assay, 3862
 Diffusion. (See also *Absorption; Membrane; Osmosis; Permeability; Ultrafiltration*.)
 of alcohols and ketones, salt conc. as affecting, fish, 10847
 analysis, of blood plasma gel, 1885
 of CO₂-O₂, through animal membranes, 12650
 equation, Stokes-Einstein, validity, 16299
 factors, from testicle extracts, 6093
 forces, in metabolizing systems, 183
 lateral, apparatus for detn., 16389
 in tissues in study of intermediary metabolism, 7420
- Digenaea (Platyhelminthes), p.1869³
 Digestibility, of carotene, rat and fowl, 320
 coefficient of proteins, man, 5522, 5523
 of feed stuffs, pigeon vs. fowl, 11512
 of forage crops, fertilizer as affecting, 4840
 of raw potato starch, man, 3682
- Digestion. (See also *Digestibility; Enzymes; Food, ingestion; Hydrolysis; Proteolysis*; and under digestive organs, e.g., *Pancreas, Stomach*.)
 in alimentary canal of mollusc, 8740
 of fat, in *Amoeba*, 8721
 in frog, study, 5601
 mechanics, 5584
 physiology, in ruminants, 4405
 in *Plumatella*, 9046
 pupil-reflex during, 7643
 in rascos, 4854
 of starch, rat, 12875
- Digestive tract. (See also *Orap; Esophagus; Intestine; Stomach; Viscera*.)
 absorption of barbitol from, 9249
 of fats, rats, 7441, 7442, 7443
 of insulin, 12643
 of starch, rat, 12875
 of toxic substance, alarm reaction as affecting, 3860
 activity, *Tenebrio* larvae, 13025
 of aeolid mollusc, structure and function, 8740
 anatomy and hist. in *Locusta*, 9786
 in kangaroo rat, 4353
 argentaffine cells, in pernicious anemia, 14930
 bacteriological problems, 2640
 cells, mechanism of secretion of Golgi bodies in, annelid, 2479
- of *Cyprinus*, hist., 11425
 diseases, anemias and, 16915
 metabolic disorders in, 7520
 disorders, in fish, 2711
 embedding in rubber paraffin, method, 7989
 emergencies, medical aspects, 14572
 extract, effect on cancer in tarred mice, 610
 food allergy, 2580, 2585, 3764
 hemorrhages from acetyl choline and pitressin, dog, 12643
 increasing frequency, 2089
 infections, alkaline lysed vaccines for, 2561
 as influenced by:
 Bryonia root, 11236
 indole, 13178
 syntropan, 14800
 juices, proteinase in, *Homarus*, 347
 local anaphylaxis in, 9862
 motility, action potentials during, 14740
 as influenced by:
 carmine, 9262
 chronic CO asphyxia, rat, 2107
 pasteurized, evaporated and base-exchanged milks, children, 16568
 vit. B complex, 11029
 physiology, review, 9252
 propulsion of substances through, 5584
 review, 7244
 secretion, balloon distention of duodeno-jejunal loops as affecting, 354
 sulfanilamide excretion in, 12877
 tumors, incidence, 13214
 inoperable, irradiation and, 14890
 in non-diabetic glycosuria, 7899
 oxidized fats and, rats, 9592
 produced with cholesterol derivs., rats, 13223
 radiosensitivity, 13235
- Digit(s). (See also *Dermatoglyphics*.)
 abnormalities, pig, 16201
 brachydactyly, in rabbit, 4394
 brachymetapody, inheritance, man, 8965
 finger, movements, development of differentiated, children, 3990
 plethysmograph, respiration as affecting, 3646
 nails, thumb, inherited absence, 7164
 types in man, 11438
 polydactyly, in Laurence-Moon-Biedl syndrome, 13196
 in mouse, 5339
 ventral horn cells and, mice, 4335
 syndactyly, inheritance man, 3469
 types, measurements, 8024
- Digitalis. (See also genus *Digitalis*; and under related digitalis principles, e.g., *Scillarene, Strophanthin*.)
 action, cumulative, rats and dogs, 4127
 potentiated by epinephrine and K, 5737
 study, 13178
 assay, anesthetic for, cat, 523
 of powdered, prep. of extract for, 14794
 cardio-inhibitory vagal effect, 400
 effect on:
 amphibian lymph hearts, 16735
 circulation time in heart failure, 9528
 contractility of heart muscle, 11162
 coronary sinus outflow, dog, 4066
 gastric secretion, 553
 heart, extracardial tissues as affecting, 13178
 heart rate in fibrillation, man, 13154
 heart sensitivity to acetylcholine, 401
 in heart block, 16723
 infusion, electrophoresis, 510
 leaf deterioration, in storage, 1323
 poisoning, quinine in, 2302
 principles and preparation, cumulation, 4102
 digitonin, effect on enteral absorption of g-strophanthin, cat, 9570
 digitoxin, cumulation, 7744, 7745
 effect on EKG, 4102
 excretion and, cat and dog, 16779
 effect on heart, cat, 7744, 7745
 digoxin, effect on K in heart, 7810
 effect on heart, 11188
 cumulative action and, cat, 9556
 potency, 513
 sensitization to Ca by, 5770
- Digitalis*. (See also drug *Digitalis*.)
lutea-D. purpurea, hybrid, chemistry of pollen of, 10781
- Digitaria* (p.1864³), Polynesian spp., 15489
 Dihydroxyphenylethanolamine. (See *Arteranol*.)
 3, 4-Dihydroxyphenylpropanolamine. (See *Cobefrine*.)
 Diiodosalicylic acid, salts, as gall-bladder antiseptics, 13541
 Di-iodothyroxine, effect on anticompement, 8123
 Dihydrotyrosine. (See under *Tyrosine*.)
 Diketochoholic acid, synthesis from dehydrocholic acid by *Proteus*, 10087
Dikraneura (p.1875⁴) *lentus*, 1629
 Dilepididae (Platyhelminthes), p.1870⁴
Dilepis (p.1870⁴) *irregularis*, in *Rostratula*, 15992
- Dill. (See *Anethum graveolens*.)
 Dilleniaceae (Dicotyledones), p.1866²
 Diluents, effect on rabies virus, 13573
 Dimedon method, formaldehyde detection in diphtheria toxoid by, 13506
Dimerium (p.1861³), n. spp., 17500
 Dimethylaminoazobenzene, as cause of liver cancer, rats, 4214, 4215
 β-Dimethylaminomethylindol. (See *Donazine*.)
Dimorphanthera (p.1866⁴), n. spp., and n. combs., 11882
 Dimorphism. (See *Sex, dimorphism*.)
 Dimyidae (Mollusca), p.1872³
 † *Dimyodon* (p.1872³) *striatissimum* (J), 15943
Dinarmus (p.1878³) *colombatarensis*, parasite of cotton stem-weevil, 14266
 Dinesis. (See *Protoplasm, streaming*.)
 Diniferina (Protozoa), p.1868⁴
 Dinitrochlorobenzene, cutaneous sensitization to, gross and microscopic changes in, 17141
 Dinitro-O-cresol. (See under *Cresol-O*.)
 Dinitro-O-cyclohexylphenol, for citrus red mite, 5016
 as dormant spray for eggs (apple aphid), 12178
 dust, in control of mites, 14106
 phys. and chem. properties, use as insecticide, phytocidal action, residue, 14105
- Dinitrophenol, carcinogenic effect on tarred mice, 610
 cataracts due to, man, 4137, 9479
 effect on:
 brain wave frequencies, 5693
 early development of teleost fish, 9774
 energy metabolism, 10971
 heart output, 4156
 metabolism, quercitrin and, 7773
 fever, as affected by lactoflavin and ascorbic acid, 13156
 by quercitrin, 7772
 neutropenia produced by, 2313
- Dinoderus* (p.1876²) *minutus*, preyed on by *Peregrinator*, 10453
 Dinoflagellida (Protozoa), p.1868¹
 Dinophyceae (Algae), p.1860³
 Dinosaurs, proboscis-bearing, discussion, 14291
Dinosoma (p.1869⁴), n. spp., 6803
 Diocism. (See under *Sex*.)
- DIODONICHTHYS (Pisces) (p.1879³), 16049
 Diolein, α,α-, and α,β-, enzymatic behavior, 7262
Diomedea (p.1881¹), food habits, 9064
 cauta, olfactory apparatus, 4369
 eomophora sanfordi, historical notes and nesting data, 10646
- Diomedelidae (Aves), p.1881¹
Dionomys (p.1878³), morph., phyl., 1632
 Dioptridae (Lepidoptera), p.1877¹
Dioscorea, as food plant, Fiji, 1241
 Dioscoreaceae (Monocotyledones), p.1865¹
Diospyros (p.1866⁴). (See also *Persimmon*.)
 monograph, malayan sp., 8431
 new sections, n. combs., 2858
 Pacific spp., 17524
- Dioxane. (See also *Benzodioxane*.)
 derivatives, effect on uterus, 5742
 toxicity, 9557
 use in making preps. of *Fucus*, 16122
 Dip, Cooper's, in filariasis therapy, 3245
Dipetalonema (p.1870³) *robertsi*, from *Macropus*, 14214
 Dipetalonematidae (Nematoda), p.1870³
 Diphenylacetyl-diethylaminomethanol. (See *Trasentin*.)
 ester, pharm., 5784
 Diphenylamine, effect on tubercle bacilli, 10090
Dipholidus typus, bite, symptoms and treatment, 12486
Dipholis (p.1866⁴), n. sp., 2882

Diphtheria. (See also *Corynebacterium diphtheriae*.)
 antiserum, antitoxic value in relation to protein fractions,4483
 physico-chemical properties, conc. as affecting,6067
 proteolysis of protein fractions,17180
 antitoxin, correlation with Schick test in scarlatina,17329
 production in non-serum-treated cases,17169
 purification and conc.,8118, 8119
 titer of blood, omnadin as affecting,868
 titration by intracut. method,4484
 transmission through homologous animal grafts,8151
 carriers, antitoxin in,4464
 bacillus types in,17381
 exp. guinea-pig,17382
 Schick tests on,4464
 case reports, statistical,15303
 clinical severity, fluctuations and epidemiol. relations in Great Britain,15350
 diagnosis by culture methods,15280
 laboratory-method statistics,4621
 epidemic in children's home,15291
 epidemiology, climatic and racial factors,989
 in Hongkong children,6219
 prevention and,15354
 as shown by bacterial types,6188
 immunity to, by infection vs. toxoid vaccination,2586
 mechanism,13429
 passive, duration with repeated injections,4505
 immunization to, by alum-precipitated toxoids vs. fluid,13508
 statistics,9894
 antigenic depot in,888
 bacillus types in,4631
 by commercial toxoids, statistics,4530
 effect on virulence of diphtheria bacillus,6323
 epidemiological relations,8144
 fractionation of serum proteins during,4483
 mass, by Sordelli's toxoid and contact immunization,17166
 Ramon toxoid statistics,4533
 recommended procedures,11560
 Schick test after, carrier rates and,7815
 statistics,17118
 with tetanus toxoids, trials,11538
 by toxoids, comparison,856
 safety and efficiency,8144
 vs. toxin-antitoxin,838
 value and limits of active,849
 intoxication, effect on heart, guinea pig,11156
 malignant, serotherapy,17171
 metabolic changes in,6119
 morbid anatomy of types compared,4617
 mortality, in Hongkong children,6219
 statistics,15353
 premunition, by alum-precipitated toxoid, statistics,6039
 pulmonary lesions and bacilli associated in,4617
 serotherapy, history,13471
 susceptibility to poliomyelitis and,4658
 therapy, by antitoxin followed by toxoid,8120
 by refined antitoxin,8119
 toxin, effect on:
 erythrogenesis, rabbit,5842
 heart,16724
 vit. G in adrenals,16937
 neutralization in tissues by antibodies, factors affecting,8111, 8112, 8113, 8114
 resistance to diet as affecting,12785
 toxoid, dosage, Moloney test to determine,13497
 formation, change of formaldehyde during,16357
 sensitizing antigens and properties,17198
 vaccination, history,13471
 types, incidence, in Liverpool,4622
 statistics,4629
 in Ukraine,4631
 outcome,16898
 Diphtheria group of bacteria. (See *Bacilli, diphtheroid*.)
Diphtherostomum (p.1870*) *magnacetabulum*,6803
DIPHUICRINUS (Echin.) (p.1871*) (Cb),10555

Diphyllobothrium. (See also *Bothriocephalus*.)
 plerocercoids, in trout,12253
erinaei, sparganum, immunity and regeneration,8689
latum, extract, enzymic activity,17891
 incidence, Indiana,14176
Diplazium (p.1863*) tax.,1097, 2816
Diplocarpon rosae, control,3153, 3158
Diplochora (p.1877*), n. spp.,14255
 Diplococci, Bergen, trilactic acid as affecting,2653
 polymorphous, polyarthritides and,4238
Diplococcus gonorrhoeae. (See *Neisseria g.*)
pneumoniae. (See also *Pneumonia*.)
 aerobic metabolism in carbohydrate-rich media,10082
 antibacterial sera, prep. of purified,4439
 antibodies to, absorption after intramuscular inj. of antiserum,827
 antigenic relations to erythrocytes and organs,6112
 antipolysaccharide precipitin to type-I, immunological properties of fractions,2523
 antiserum, action in exp. infections,13442
 chemotherapy synergy for,8185
 concentration,4452
 detn. of specific protein in,13898
 fractionation of globulins of types I and II,8117
 hemagglutinins,17234
 penetration into lungs,13442
 phenol adsorption by proteins in prep.,4651
 pneumococci rabbit, admin., blood groups and,17227
 in lobar pneumonia therapy,13402
 production,13422
 prep. methods compared,6099
 prep., titration and clinical value of all types,11540
 production and standardization of diagnostic,6077
 rabbit vs. horse,5820
 -sulfapyridine therapy of infections,13470
 autogenous vaccine prep.,8107
 autolysis, ultraviolet as affecting,13495
 avirulent, pathogenicity in absence of leukocytes,17313
 in bronchopneumonia,8220
 chemotherapy of infections,6152
 9914, 13544
 13545, 17250, 17259
 review,11810
 plus serotherapy,11586, 15190
 by type-I, effect on immunity,11606
 by type-III,13537
 by sulfur derivatives of benzene,9929
 choline causing long-chain growth,13627
 cutaneous tests in polysaccharide-immunized vs. non-immunized, serum antibody relations,15137
 detection of blood-agar colonies, by dried bile,11657
 diagnostic sera,8145
 prep. and analysis,4528
 differentiation, by biochem. properties,9961
 dosage, in expl. lobar pneumonia,5821
 encapsulated, sputum incidence in lobar pneumonia,4612
 immunization to,963
 antiautolytic enzyme evoked by,13494
 in laboratory animals,808
 by stock vaccine,13401
 by type-III antiserum,13587
 immunizing antigens of types I and II, and their conc.,826
 immunizing substances in,15137
 immuno-chemotherapy of infections by,17189
 immunological surface phenomena in,11554
 infections, bactericidal agent from soil bacillus as affecting,13695
 course in tuberculous rabbits,628
 epidemic of type-I,983
 local protection against with type-I,9850
 localization in immunized rabbits,626
 of meninges, repair, histopath.,13238

Diplococcus (continued)
pneumoniae (continued)
 infections (continued)
 mononuclear response, guinea pigs,13236
 resistance to, alcohol and anesthesias as affecting,625
 sulfapyridine therapy,9935, 9928
 in type-II,11574
 sulfonamide therapy, mechanism of action,4564
 of type-II,4556
 of type-XXII,4564
 as influenced by:
 apocupreine ethers,16778
 embryonic tissue,11558
 sulfanilamide,2662
 sulfapyridine,8179, 15190
 15206, 17247, 17249, 17271
 sulfonamides,4550, 17276
 sulfones,17262
 lobar pneumonia due to, book,13604A
 types, case statistics and specific serotherapy,9856
 lysis by bile salts, specific antiautolytic enzyme as affecting,13494
 by soluble agent from soil bacillus,6160
 -meningitis, chemotherapy,17265
 in fatal case,17266
 sulfanilamide, serum and combined therapy of type-I,13540
 phagocytosis, mechanism,9881, 9882
 pneumonias due to, serotherapy,4436
 17132
 sulfapyridine therapy of types,13547
 to type-III, sulfanilamide-serum therapy,17183
 in pneumonias, type analysis statistics,11637
 polysaccharides, capsular, sulfonamides as affecting,17276
 cellular reactions to,2569
 from mucoid substance, serological properties,4475
 polysaccharides of nitrifying bacteria and,1058
 rabbit vs. horse antiserum therapy, in pneumonia,13510
 resistance to proliferation, non-specific factors in,6072
 seasonal incidence, infants,15318
 septicemia, bilateral endophthalmitis complicating,17312
 serological grouping of strains,906
 serum properties after immunization by, heterophile antigen as affecting,17178
 specific soluble substance of type-III, mechanism of pneumonia development by,17308
 streptococcus differentiation from,13627
 sulfanilamide acquired tolerance,15209
 "sulfapyridine-fast" strain of type-I,11594
 metabolism,11595
 in surgical infections, chemotherapy by sulfonamide compounds,4553, 4554
 therapeutic evaluation by exp. infection with,13462
 type incidence in infections by, method and statistics,11662
 in lobar pneumonia,13629
 types, heterophile antibody adsorption by,896
 specificity by agglutination vs. Quellung reactions,11663
 in S. Africa,963
 type-I, antibody recovery from immune precipitate, optimum conditions for,13453
 as influenced by sulfanilamide in vitro,9937
 by sulfapyridine,17273
 serum therapy in lobar pneumonia,4235
 type II, infections, chemotherapy, mice,13178
 sulfapyridine as affecting,9925
 sulfapyridine vs. sulfanilamide therapy of infections,9934
 type-III, chemo-serotherapy,15191
 chemotherapeutic agents as affecting,15197
 typing, by microscopic precipitin test,6097
 by modified Neufeld method,17330

- Diplococcus (continued)*
pneumoniae (continued)
 typing (continued)
 Neufeld method, 4477
 vs. mouse methods, 17328
 work kit for, 4508
Diploia (p.1862⁴), blue stain of jelutong due to, control, 10381
zeae, scoleospores in, 2806
Diplodiscus (p.1870¹) *americanus*, in *Amphiuma*, 6716
temperatus, biology in frog, 12252
 rediae of, 1st generation, descr., 1592
Diplogaster (p.1870¹), n. spp., 8739, 14218
Diplogasteridae (Nematoda), p.1870¹
 Diploidy, in apples, relation to fertility, 2997
Diplomystus (p.1879¹), spp. descriptions and key, 5161(E)
Diplonavia (p.1862²), new species, 6364
Diplophlyctis (p.1861²), culture, 17488
laevis, structure, 18737
Diplopoda (Myriopoda), p.1873¹
 antennal musculature, 10577
 millipeds, from Cuba, 5124
 habitats in Central Europe, 12318
Diplostachyum (p.1864¹), n. sp., 6376
Diplostomum (p.1870²) *spathaceum*, excretory syst. development, 10542
 Diplozoa (Protozoa), p.1868¹
Dipneumonomorphae (Arachnida), p.1874²
Dipneusta (Pisces), p.1879¹
Dipodomys (p.1882⁴), n. subapp., 18096
spectabilis baileyi, re-assimilation of food, 18105
Diprion (p.1878²), damage to forests, 12207
 European spruce, in Quebec and Ontario, 10423
frutetorum, cocoons of, parasitized by *Microperlethra fuscipennis*, 10432
polytomum, life hist. and control, 12206
 life hist., distrib., parasites, 14123
 Dipsacaceae (Dicotyledones), p.1867³
 Diptera (p.1877²) (See also *Fly*)
 of lakes of northern U.S., ecology, 8999
 larvae, chloride ion absorption by anal papillae, 5432
 origin of polytene chromosomes, 8913
 Diptercarps, wood props., 17643
Dipterocarpaceae grandiflorus, wood rot of, 17851
Dipurena (p.1869²) *halterata*, hydroid descr., 15983
Dipylidium (p.1870⁴) *cantium*, in dogs, 15956
 in man, 8633
 morph. bionomics and tax., 14212
secoconatum, validity, 10545
Dirofilaria (p.1870³) *asymmetrica*, from *Cephalophus*, 14216
immitis, in dogs, 1539, 5095, 15956
 transmission, 12262
 Discellaceae (Fungi), p.1862⁴
Disciphana (p.1865⁵), n. sp., 10129
Discoelisia (p.1869²), of east coast N. America, 6798
Discodinium (p.1868³) *poucheti*, n. g., n. sp., structure, reproduction, and nutrition in, 8715
Discoglossidae (Amphibia), p.1880¹
Discoglossus (p.1880⁵), iris transplants with and without retina regeneration, 5959
pictus, germ cells, localization in early developmental stages, 13835
Discoognathichthys rossicus var. *nudiocentris*, in malaria control, 15951
Discoiplana (p.1869²), syn. of *Euplana*, 10540
Discorehnia (p.1862⁴), n. sp., 15453
Discothyrea (p.1878⁴), n. sp. and key, 14270
 Discriminometer, descr., 7629
Diocula platani, on sycamore, control, 5005
 Disease(s). (As far as possible the indexing is done under specific diseases, e.g., *Diphtheria*, under specific causal organisms, e.g., *Eberthella typhosa*, *Pseudina graminis*; under specific hosts (except man), e.g., *Dog*, *Wheat*; under specific organs, e.g., *Kidney*, etc. See also such general headings as *Diet*; *Epidemiology*; *Immunity*; etc.)
 allergic, in childhood, 6088
 anaerobic bacteria causing, book, 10086
 animal, report, 2701
 ticks as vectors, 10025
 autonomic nervous system and, 7665
 bacterial, chemotherapy, book, 9917
 body types, in. (See *Body, constitution*.)
 causes and prevention, textbook, 15325
 Disease (continued)
 of central nervous system, diagnosis, 15384
 chronic, effect on physical and mental capacity, 4230
 circulatory and metabolic, in relation to climate, 8987
 control. (See also under specific diseases and organisms; also *Fungicides*; *Insecticides*; *Sanitation*; *Sprays*; etc.)
 governmental procedures, 15301
 deficiency. (See also under *Nutrition*; *Vitamins*; and under specific deficiency diseases, e.g., *Beriberi*, *Rickets*, etc.)
 animal, avitaminoses, in horses, 17384
 in pigs, 6242
 bovine leukosis as, 6228
 cobalt, in livestock, 17385
 Mn deficiency in poultry, 6024
 of newborn lambs, 11510
 nutritional address, 14948
 P., in cattle, Penna., 15090
 pica in sheep, 15388
 of ruminants, licking disease as (?), 17389
 Si., effect on wool of sheep, 11487
 survey, 15383
 vit.-B₁ paralysis in foxes due to, 11737
 plant. (See *Mineral nutrition, plant*.)
 dental, book, 9700
 diagnosis, laboratory index for, 17359
 laboratory manual, 17357
 diarrheal, acute, parasitology, 17914
 of domestic animals, review, 11729
 comparative pathological anatomy, 2693
 of domestic and wild animals in Africa, intertransmissibility, 11750
 effect on:
 autonomic ganglia, 4297
 bodily growth in infants, 559
 industry, 14988
 enviromental relations, 10008
 in etiology of Wernicke's encephalopathy, 7904
 of fish, treatment in ponds and hatcheries, 15361
 fungous. (See also *Mycoses*; *Dermatoses*; etc.)
 chap. in manual, 14164
 gastro-enteric, bacteriol. problems, 2640
 genito-urinary, in cats and dogs, 15378
 industrial. (See *Industrial diseases*.)
 infectious. (See also *Infections*.)
 book, 9902
 in newborn, etiology, 2163
 plumbing in relation to, 11693
 inflammatory, autolysis of leucocytes and lymphocytes in, 250
 inheritance. (See under disease inherited and under animal inheriting.)
 of livestock, wild animals as carriers, 8321
 mental. (See *Psychoses*.)
 metabolic, mortality and factors in, 986
 ophthalmic, shock and fever therapy in, 18432
 organic, glycosuria and, 7899
 parasitic, book, 8238
 dangers in sub-tropics, 6723
 plant. (See *Plant diseases*.)
 plumbing-borne, 11693
 polarographic study of serum, 18234
 prevention, book, 10028
 propagation, climate as affecting, 14391
 renal functional disorganization in, 7568
 resistance to. (See also *Immunity*; and for disease resistance of plants see *Plant, diseases*.)
 to cancer, 11275
 circulatory factors in non-specific, 6070
 helminthiasis as affecting, Nigeria, 8690
 in lambs, nutrition as affecting, 6728
 natural, specific antibody production unrelated, 13411
 non-specific factors in, 6070
 to trypanosomes after hypophysectomy, rat, 3882
 respiratory, nasopharyngeal flora in infants and, 15318
 rôle in mortality in domestic fowl, 6015
 severity, numerical expression, 13601
 skeletal nutrition relations in horses, 15365
 Disease (continued)
 surgically treated %, statistics, 977
 susceptibility, of normal wheat hybrids to *Ustilago*, 16182
 systemic, intestinal manifestations, 2841
 Takata reaction, in blood, 14986
 tick-borne, biological control, 11707
 in India, 11707
 in Uganda, 2718
 tropical, problems in control, 4665
 uroterine in urine in, 13019
 vectors. (See *Carriers*; *Insects*.)
 vit. C in, 11020
 of wild animals, 6249
 Diselenodiacetic acid, effect on metabolism, 13178
 Disinfectants. (See also *Antiseptics*; *Bactericides*; *Dips*; *Fungicides*; and other special agents, e.g., *Phenol*.)
 alkyl-dimethyl-benzyl-ammonium-chloride as, 13572
 boiling soda solutions as, 2679
 effect on diphtheria toxin and anti-toxin, 3154
 on *Salmonella typhimurium* receptors, 2593
 fish diseases treated by, in ponds and hatcheries, 15361
 inorganic, tests against molds, 17397
 lysol, prep., 2676
 resistance to, peptone as affecting, 998
 swine-fever virus resistance to, 958
 in trichinosis therapy, 8713
 volatile substances as, test, 16801
 Disinfection. (See also *Disinfectants*; *Fumigation*; *Photodynamic action*; *Spraying*; *Sterilization*.)
 advances since Lister, 11692
 dry cleaning processes and, 15341
 of eating utensils, 3299
 by electrokatadyn method, 2674
 by formaldehyde vapors, efficacy and technic, 15323
 of hands, by alcohol, mechanism, 15321
 rates, detn. method, 2675
 of seeds. (See under *Seeds*.)
 of skin, 2682
 of soil. (See under *Soil*.)
 of surgical dressings, by electric fields, 1000
 of water, by chlorine, 15324
 Disparichthyidae (Pisces), p.1879²
Disparichthys (p.1879²) *herrei*, 5159
 Dispersal. (See also *Air*; *Airplane*; *Altitude*; *Atmosphere*; *Bacteria*; *Diseases*; *Dust*; *Epidemics*; *Epidemiology*; *Fungus*; *Insects*; *Molds*; *Pollen*; *Rainfall*; *Rusts*; *Seed*; *Spores*; *Wind*.)
 of animals by floods in caves, 12573
 of beetles, by wind, 1824
 of *Conidiobolus conidia*, 10111
 of Entomotrachea, 17971
 of flea hopper by wind, 5029
 of forest insects, 15911
 of insects by airplanes, 9007
 of insect pests and diseases, by airplanes, 10767
 of mold spores, 8389
 of organisms across water gaps, 5374
 of plants, 7208
 retardation in Palestine, 9039
 of psychid moth, 12576
 of sea birds in storms, 7002
 of weeds, agents causing, 1186
Disphaericus (p.1876¹) *alluaudi*, 3322
Dispharynx (p.1870²) *pipilonis*, from bird, 14217
 Dissociation, constants, of phosphoric acid, 9084
 of proteins, fatty acid salts as affecting, 7449
 Dissociation (microbic). (See also *Autolysis*; *Bacteriolysis*; *Bacteriophage*; *Cytolysis*.)
 in anthrax bacillus, 6321, 10094
 in avian tubercle bacillus, 1014, 6247
 in *Bacillus salmonicida*, 13696
 chemotherapy as affecting, 6154
 effect on optical specificity, 6324
 in *Erysipelothrix*, 4704, 13691
 in hemolytic streptococci, 2540
 in *Hemophilus influenzae*, 10078
 in *Lactobacillus*, 2777
 in *Listeria*, 4704
 in *Mycotorula*, 9976
 in *Pasteurella*, 892, 893, 6315
 in pertussis bacilli, 9865
 in *Prototheca* (green alga), 6327
 rate, x-rays as affecting, 17458
 in *Salmonella*, 15417
 in *Shigella*, 4456, 18611
 in staphylococci, 2772

in *Staph. aureus*, 6324
in streptococci from dental caries, 11794
in *Strep. equi*, 6322, 13668
taxonomic significance, 17468
in tubercle bacillus, 4624, 4625, 13700
in typhoid bacillus, 879
in *Vibrio comma*, 17448
Dissosteira (p.1875) *longipennis*, migration of, expts., 14122
Dissotrocha (p.1871) *hertzogi*, in cave, 14219
Distemper, chemotherapy, 11601
comp. histopath. of fox encephalitis and, 6240
effect on renal ischemia, 11181
inclusion bodies in, 6168
rapid diagnosis by, 11738
lymphocytic choriomeningitis viruses associated, 2612, 13591
throat, epidemic of 1735, book, 16290
vit. A as affecting, 11753
Distichocera (p.1876), syn., 10595
Distilled water. (See under *Water*.)
Distillery by-products, as feed for poultry, 2504
Distomatosis. (See also *Distomum*.)
Cuba, 14192
Distomum (p.1870) *tropidonoti*, redescr., 15990
Distribution. (See *Phylogeography*; *Zoogeography*.)
Distylia (p.1871), syn., 17962
Disulphite compounds, reaction with photungstic acid and sulfite, 208
Dithioglycollate, effect on blood and tissue glutathione, 16408
Ditropitatus (p.1878), morph., phyl., 1632
Ditylenchus dipsaci, control, 5011, 12196
destruction of, by *Arthrodetrus*, 6842
Ditylum brightwellii, culture, 12077
Diuresis. (See also *Kidney*; *Urine*.)
anti-, principle in urine of eclamptic and pre-eclamptic patients, 9409
in decerebrate hypophysectomized, 13027
effect on glucose excretion during constant glucose infusion, dog, 3943
as influenced by:
acetylcholine, pituitary and, 7557
afferent stimuli, 12643
ant. pituitary extracts, 11086
blood sugar, 8873
ergot alkaloids, 5794
induced accessory renal blood supply, 7562
intracranial pressure, denervated kidney, 11091
post. pituitary extracts, 14633
extracts of body fluids and, 16636
potassium, adrenalectomized rat, 5639
subcut. admin. of water and salts, 16655
urine extracts, 3829
vagab stim., 13009
production by holly injections, 7558
Diuretic(s). (See also specific diuretics, e.g., *Caffeine*.)
caffeine potassium chlorogenate as, 7763
ergot alkaloids as, 7814
isomannide as, 3638, 13178
juniper berries as, 4168
mercurial, chem., 16753
excretion, theophylline as affecting, 516
oil of *Radix ononidis* as, rat, 16783
 α -phenyl- β -aminopropane as, 16764
rest harrow root as, 4168
sodium sulfate as, factors affecting, 16648
watermelon juice as, 16808
Diurnal variations. (See under *Periodicity*.)
Diversinervus (p.1878), sp. parasitic on *Saissetia oleae*, 10448
DIVERSOPHYLLUM (Coel.) (p.1869) *traversense* (D), 10535
Divinyl ether, effect on intestinal activity, 346
plus ether as an anesthetic, man, 16760
rate of elimination, 10931
Diwippus, regeneration in, 435
Dieggomyza (p.1877), injury to broad-leaved trees, 3193
Symphia spp. parasitizing, 3193
Djenkolic acid, in seed of *Parkia speciosa*, 3052
Docoglossa (Mollusca), p.1872
Dodder. (See *Cuscuta*.)
Dodecatheon (p.1866), n. syn., 1158
DODGEA (Fungi) (p.1862) *occidentalis*, 8402

Dog(s). (See also genera, e.g., *Canis*.)
abortion, *Salmonella abortus canis* in, 11635
anesthesia, review, 1019
arteries, of great omentum, 671
blood picture of young normal, 15370
bone marrow, activity of reticuloendothelial system in, 11885
brain tracts, mesencephalo-olivaris medialis and tectocerebellaris, anatomy, 7952
cancer of liver in, 15376
as carrier of *Capillaria* ova to man, 8691
dental anomaly in, 18105
diabetes produced by ant. pituitary extracts, 5616
Dirofilaria in, survival and location, 5095
distemper. (See *Distemper*.)
dorsal roots, lumbo-sacral, section, intact fibers in, origin, 2436
Endamoeba histolytica in, exptl. studies, 6757
endocarditis (streptococci exp.) in, 9958
in endotheliochorialis group of placentas, 9906
euryblepharon in, 15390
as exanthematic typhus reservoir, 13583
exptl. *Dracunculus* infection, 3248
exptl. *Trypanosoma evansi* in, 12259
external auditory meatus, position, racial differences in, 4314
genital tract, castration and hypophysectomy as affecting, 14674
genito-urinary diseases, 15378
gingiva, hard and soft diets as affecting, 16452
heartworms, New England, 1539
helminths, Egypt, 10480
Surinam, 15956
hookworm, immunization by subcutaneous inj. of larvae, 4548
hybrids, gastric mucosa after hypophysectomy, 7968
hypoglossal nerve, origin, 13298
immunity of newborn, transfer via colostrum vs. placenta, 9906
kidney, structure of glomerular capillaries, 4841
vascular supply, degenerating glomeruli and, 13294
of Kodiak Island (Alaska), skull measurements, 18085
larynx, innervation, 11400
leishmaniasis, exptl. infection of sandfly, 17896
with skin lesion, Peiping, 12250
Leptospira canicola incidence in, 15319
Leptospira teterohamorrhagiae infecting, 15380
lungs, blood-perfused, observations, 3775
lymphatic pathway from nose and pharynx, 676
lymphocytic choriomeningitis and distemper associated in, 13591
meningomyelitis in, case reports, 11754
myocardium and auriculo-ventricular conducting system, cytology, 7939
large vascular sinuses in, 11457
nambivud disease, nature, 14182
neuromuscular activity, of pure breeds and hybrids, 12643
nicotinic acid requirement, 7475
as paratyphoid carrier, 10007, 11696
piroplasmosis. (See *Piroplasmosis*.)
pituitary, changes induced by adm. of pituitary extracts, cytology, 15024
vascular supply, 13295
purebred, cardiovascular and metabolism studies in, 273
rabies. (See *Rabies*.)
renal disease in, 14668
Rickettsia canis infection, 8218, 8219
Rocky Mountain spotted fever transmitted by ticks from, incidence, 8298
Salmonella glostrup from, 15417
sex cycle in, hormones as affecting, 7574
small intestine, wandering lymphocytes in, hist., 15040
spaying in, 15387
spleen wt. in relation to heart and body wt., exercise and, 15008
staphylococci cutaneous infection, chemotherapy, 15387
stomach, exptl. amebic infection, 10495
Strongyloides in, Mass., 10479
tapeworm, in rabbits, 15976

Dog (continued)
teeth, changes in pulp and dentine after exptl. cavities, 2450
enamel, structure, 16995
thymus, development, 4379
thyroid, interfollicular cells, structure and significance, 5894
nuclear, cytoplasmatic and colloid pH, 16986
trichinosis incidence, New Orleans, 16904
trypanosome infection and germanin therapy, 4680
tuberculosis, bacillema in exptl. incidence, 8297
transmission from man to, 8295
uricase in liver, 2102
urinary and blood bases in, 13012
vit. D₂ as affecting, 2083
wild, as reservoir of *Rickettsia canis*, 8219
Dog-fish. (See also *Squalus*, etc.)
nomenclature of American and European spp., 6956
Dogwood. (See *Cornus florida*.)
Doirantia (p.1878) *leefmansii*, as parasite of *Seava*, breeding of, 8685
Dojin Medical Society, history and work, 17375
Dolichopodidae (Diptera), p.1877
Dolycoris acarus, ecology, 12580
Domene (p.1876) *gaudini* (J), 3327
Domestic animals. (See under *Animals*; and under specific animals, e.g., *Cattle*.)
Domestic fowl. (See also *Egg*, *poultry*; *Gallus domesticus*; *Poultry*. For embryologic material, see *Chick*.)
anserine in muscles, 9506
antigenic action of duck egg-white on, 905
artificial insemination, 18386
avian tubercle bacilli in dressed, 1012
bacillary white diarrhea in. (See *Salmonella pullorum*.)
blood, non-fermentable reducing substance in, 7337
blood Ca, high temp. as affecting, 15114
blood cells, count of normal, 5885
blood phosphatase and P in, 1974
blood P, during egg cycle, 2510
gonadotropic hormones as affecting, 3855
blood serum, serol. comparison with duck, 905
blood sugar, fasting level, 12643
blood urea, normal value, 10908
body fat, ant. pituitary extract as affecting, 12643
body gain when fed 2-5 times daily, 17104
body measurements and fattening gains, 15119
body wt. correlated with shank length, 17102
egg wt. and, dietary problem level as affecting, 788
breeds, differences in resistance to extreme heat, 789
to vit. B₁ deficiency, 8093
egg production comparison, 787
rank in egg-laying trial, 17113
White Leghorn, influence of inbred sires, 97
broiler feeding expts., 793
Ca and P in, 14543
Capillaria columbae in, 14193
cestodes in, ants as intermediate hosts, 14160
Hawaii, 10477
chicks, antidermatitis factor, 8730
in assay of thyrotropic hormones, 2119, 3915
basal metabolism, 16472
beryllium rickets in, 2402
blood clotting time in dietary deficient, 12757
body temp., 2508
cage for individual nutrition studies, 792
cecectomy, effect on growth and infectability, 17909
comb growth, androgens as affecting, 5612
curled toe paralysis, riboflavin as affecting, 650, 9234
dermatitis, chondroitin sulphuric acid as affecting, 16523
histopath., 7464
encephalomalacia in, prevention, 2403
erythroleukosis transmission in, 17387
exptl. trichinosis, 8700

Domestic fowl (continued)

- chicks (continued)
 feeds for, dried buttermilk as, in
 coccidiosis,9820
 phosphorus in,3741
 protein combinations as,15125
 formula for surface area,16472
 gizzard, nutritional lesions in, 11730
 chondroitin sulfuric acid as
 affecting,2691, 3705
 goiter in, histopath.,17392
 gonads, x-rays as affecting,12695
 growth, chondroitin sulphuric acid
 as affecting, 2691, 3705, 7484
 Mn assimilation and storage in, 7450
 Mn requirement,9165
 pantothenic acid requirement, 14560
 perosis, blood and bone phosphatase
 in,3567
 Mn in prevention, 2695, 2696, 9166
 mineral salts as affecting,6251
 postnatal growth, factors affecting,
17096
 riboflavin deficiency in, histopath.,
324
 riboflavin requirements,15116
 sex detn. by color markings,15123
 in hybrid chicks,15124
 thyroid wt., assay of thyrotropin
 and,14607
Trichomonas foetus exptl. infections
 in,17900
 vit. A in eggs and,3713
 vit. A requirement,8094
 vit. C in blood,330
 wt. cestode infection as affecting,
1560
 cholera in. (See *Pasteurella avicida*.)
 coccidiosis in. (See under *Coccidiosis*.)
 cock, blood Ca and fat, estrogen as
 affecting,5517, 9352, 12966
 estrogens as affecting,9296
 comb, androgens as affecting,7540
7545, 14637
 estrogens and,9351, 9352
 temp. as affecting response to,
3831
 atrophy after adult castration,3830
 growth, assay of androgens by
 inunction,12643, 12958
 maintenance dosage of testosterone,
12938
 rate with androgen,3816
 inheritance of spike blade,16207
 penetration of sesame oil and an-
 drogens,12992
 coryza, type III, a complex infection,
16905
 diphtheria in. (See *Fowl, diphtheria*.)
 dressed, precooling,13670
 duodenum, goblet cells, effect on nema-
 tode parasites,6127
 ectoparasites, sparrows as vectors, 1517
 egg characters, breed variations in,
15115
 egg formation in,5945
 egg production. (See *Eggs, poultry*.)
 eggshell thickness, inheritance,6025
 electrical methods of killing,17107
 energy requirements,11506
 equine encephalomyelitis susceptibility,
1018
 exptl. *Capillaria* infection, blood studies,
3249
 exptl. *Trypanosoma brucei* infection,
1541
 fat and Ca metabolism, estradiol as af-
 fecting,12966
 feathers. (See *Feathers*.)
 feeds for, cacao shell meal as,9811
 carotene from alfalfa as source of
 vit. A,15127
 cereals, comp. values for fattening,
15120, 15121
 changes, response of laying hen to,
17112
 cod-liver oil in,17097
 grain vs. non grain, effect on egg
 production,794
 green feed as,2505
 malvaceous plants, egg deterioration
 from,15118
 oat hulls as, cannibalism-preventing
 properties,790
 pelleted rations as,2514
 potatoes as, for fattening,2512
 protein concentrates, effect on
 growth,6014
 protein level, effect on growth, 15111
 effects,6013
 protein requirements,8095
 protein supplements, effect on egg
 production,6019

Domestic fowl (continued)

- feeds for (continued)
 rations, comp. and characteristics,783
 wheat bran as, effect on rate of
 growth and development,15126
 feeding systems, for laying hens, 9825
 flock improvement,11513
 gapeworms, control,3253
 gastric secretion,9254
 genetics of Brahma Barred Rock mosaic,
1778
 genetic growth constants,95
 gonad function, thyroid ablation as
 affecting,11055
 growth, feed consumption and,783
 breed comparison,17106
 rate, cereals as affecting,15120
15121
 ratio of tarsometatarsus, 2050, 2051
 tapeworm infestation as affecting,
17898
 heated pens, effect on egg production
 and feed consumption,17098
 helminths, Scotland,6749
 hens, differential sensitivity to andro-
 gens,2155
 oviduct fluke, dragonfly as vector,
12258
 henny feathering in, factors in, 2167
 infectious laryngotracheitis in. (See
Laryngotracheitis.)
 kidney, osmotic function,9402
 leucemia in. (See *Leucemia*.)
 leucosis in. (See *Leucosis*.)
 lipids of blood and liver, endocrine
 control,3697, 3699
 long bones, wt. and comp., bilateral
 variation,9708
 Mn deficiency in diet,2696
 Mn requirement, perosis and,6024
 Mn utilization, factors affecting, 14552
 mortality in adult, genetics,6015
 mycosis,2697
 nematode in cecum, Hawaii,10478
 new sex-linked mutation, naked, 1772
 olfactory formations, structure and
 function,9676
 ovary, unusual activity in,17100
 oviduct, duplicated,17105
 ovum, growth,13388
 paralysis in. (See *Neurolymphomatosis
gallinarum*.)
 paratyphoid, of chicks, *Salmonella* types
 in,6239
 serodiagnostics by egg-yolk agglutina-
 tion,2603
 pigment in iris,16678
 pituitary, gonadotrophic and adreno-
 trophic hormones,5640
 morphogenesis,4377
Plasmodium gallinaceum in, exoerythro-
 cytic forms,12254
 in exptl. path.,7862
 in reticulo-endothelial cells,6722
 plumage. (See under *Plumage*.)
 post. pituitary extracts, assay,12942
 from hen glands, analysis,9385
 pox in. (See *Epithelioma contagiosum*.)
 a pseudogynandromorph,8955
 pullets, masculinizing effects of gonado-
 trophic hormones,11416
 pullorum disease in. (See *Salmonella
pullorum*.)
 regeneration of testis after castration,
656
 riboflavin requirement for reproduction,
17110
 Rous sarcoma. (See *Tumors; Rous
sarcoma*.)
 semen, density of suspension and morph.
 of sperm, fertility and,13047
 fertilizing capacity, factors affecting,
420
 production,2503
 sex development, brooder heat and hu-
 midity as affecting,15113
 sex differentiation, by visceral organs,
4423
 skeletal development, sunlight as af-
 fecting,6020
 skin pigmentation induced by neural
 crest grafts,5954
 sperm in vas deferens, androgens as af-
 fecting,3970
 spirochaetosis. (See under *Spiro-
chaetosis*.)
 taste sensitivity,2201
 testes, effect on sex plumage,2160
 tuberculosis in. (See *Mycobacterium
avium*.)
 tumors in. (See under *Tumors*.)
 typhoid in. (See *Salmonella gallinarum*.)
 uterine secretion, comp.,412

Domestic fowl (continued)

- vit. A, in liver, relation to disease, 786
 requirement of laying hens,6012
 vit. A from shark liver oil for,17106
 vit. B studies in,323
 vit. D from several sources as affecting,
2081, 2082
 water retention, pituitrin as affecting,
14610
 Dominance, physiological. (See *Gradients;
Growth; Polarity*.)
Donacia (p.1876²), key and n. spp., 8774
 Donaldson, Henry Herbert, biography,
3425
 Donath-Landsteiner test for paroxysmal
 hemoglobinuria, technic,636
 Donaxine, effect on epinephrine action,
 dog,13175
 Donkeys, sneep-pox virus inoculation to,
956
 Dopa reaction. (See under *Phenylalanine*.)
 Dormancy. (See also *Anabiosis; Desicca-
tion; Hardiness; Hibernation; Seed*.)
 in cucumber seed,14000
 cytology, in *Pisum*, *Zea*, *Phaseolus*, 8909
 of gladiolus corms, effect on respiration,
17693
 of grass seed, light and KSCN as af-
 fecting,6587
 of hop seed, factors affecting,6588
 of lettuce seed,1369
 of lily bulbs, O as affecting,17697
 of mites, temp. relations,10420
 of potato tubers, breaking with chemi-
 cals,1366, 14001
 factors affecting,12075
 O₂/CO₂ ratio as affecting,6589
 summer, of vegetation,10789
 Doropogonidae (Crustacea), p.1873³
Doropogon (p.1873³) *curvatus*, commensal
 in *Styela*,8752
Dorosoma (p.1879²) *cepidiatum*, in fresh
 water,3381
 Dorosomidae (Pisces), p.1879²
Dorotheanthus (p.1865²) *criniflorus*,
 synonymy,1126
Dorycnium (p.1865⁴), n. sp.,8444
 Doryl. (See *Choline, carbaminoyl*.)
Dorylaimata (Nematoda), p.1870⁴
Dorylaimidae (Nematoda), p.1870⁴
Dorylaimus (p.1870⁴), tax.,15998, 17957
DORYLAINI (Dipt.) (p.1877⁴), n. tribe in
Dorylaimidae,10598
Dorytomorpha (p.1877⁴), n. spp.,10599
Dothichloe (p.1861⁴) *limitata*,13732
 Dothideaceae (Fungi), p.1861⁴
 Dothideales (Fungi), p.1861⁴
Dothidea (p.1861⁴), tax.,13736
Dothiorella, on elm,1426, 10346
 ribis, latent infection of tropical fruits
 due to,8599
 Dough, bread. (See under *Bread*.)
 deep-frying fats for, at high altitudes,
10060
 Douglas fir. (See *Pseudotsuga*.)
 Dourine. (See also *Trypanosoma
equiperdum*.)
 germanin therapy,6135
 Dove(s). (See also *Columba; Pigeon*.)
 mourning, descr. and life history, book,
8840
 food habits, Alabama,18079
Haemoproteus incidence in,17901
 olfactory formations,9676
 turtle habits, Switzerland,8848
 Draba, notes,10185
 Dracena, age of trees, Canary Islands,
2995
DRACOCCLAENUS † (Mamm.) (p.1883³)
 Dracontiasis, exptl., in dogs,3248
Draconculus. (See also *Guinea worm*.)
 medinensis, exptl. infection, dogs, 3248
 incidence, Shorapur,14181
Draeculacephala mollipes (Hemiptera), stem
 galls of sugar cane induced by in-
 fecting extract of,4985
 Drafts. (See under *Air currents*.)
 Dragon flies. (See *Odonata*.)
 Dragon tree. (See *Dracena*.)
 Drainage, diking in mosquito and sandfly
 control, Fla.,12218
 effect on malaria in children, Sierra
 Leone,14185
 Drassidae (Arachnida), p.1874²
Drassodes (p.1874²) *neglectus*, gynandro-
 morphism,8317
 "Dreft," selective bacteriostatic and
 fungistatic actions,4648
Dreisenia (p.1872³), functional anatomy of
 bivalve,10560
Dreiseniidae (Mollusca), p.1872³
Drepananthus (p.1865²), n. spp.,15505
Drepanopsetta (p.1879⁴), abundance in
 Baltic, factors affecting,5405

Dreyfusia (p.1875*), bionomics and control, life history,1511
nüsslii, on *Abies alba*, life hist. and control,14129
 Drier, portable field,11944
Drilonereis (p.1871*), syn.,17962
 Dromedary. (See *Camel*.)
 Dromiacea (Crustacea), p.1874³
 Dromideia (Crustacea), p.1874³
 Drop-counter, microphonic,12643
 Dropsy. (See also *Ascites*; *Edema*.)
 epidemic, sunlight therapy,11342
 urinary comp. in,267
Drosophila (p.1877*), spp. antigen reaction,6893
 bar-eyed mosaics,1770
 blood cells, cultivation in vitro, 13341
 chromosomes, salivary, ash pattern of,1695
 color of testes in relation to color of vasa efferentia,7156
 crossing-over as affected by ultraviolet,10736, 10737
 crowding as affecting, review,9000
 deprived of wings and halteres, wing musculature in progeny of,12500
 diffusible eye color substances of, compared with those of *Ephesia* and *Habrobracon*,1760
 effects of reduced atmospheric pressure and oxygen on bar-eyed,1776
 eggs, x-ray effects on, inheritance structure of cell and,5472
 eye color development, hormones and,4399
 eye-color hormones, tests for, in other insects,7149
 eye pigmentation, review,12540
 facet number in mutant bar,12541
 hemithorax, occurrence,8058, 8061
 and inanition, effect on somatic modification,91
 interspecific organ transplants, developmental relations, 17061
 magnitude of cell sensitive volume associated with white-eye locus,1769
 morphogenesis, rôle of hormones in,9781
 x-rays and,8055
 pupae, as influenced by irradiation,1907
 puparium formation, rôle of ring gland in,9784
 rate of wing movement,8762
 selective value of certain genes and their combinations,8464
 serologic relationship of spp., 18008
 serological reactions and phylogeny,1620
 sexual isolation in,3982
 somatic crossing over and somatic translocations,7155
 "sump" technique for study of morphology,1773
 wing form, as affected by ultraviolet light,14368
algonquin, salivary chromosomes, structure,14351
ananassae, crossing over, enhanced, in second chromosome,7151
 genetics and cytology,1725
azteca, structure and variation of chromosomes,5335
funebria, embryology effect of dominant lethal gene Pph,16205
melanogaster, closely linked dominant mutations in third chromosome,12555
 comparative effects of x-rays and γ rays on pupae,14372
 correspondence between linkage maps and salivary chromosome structure,7112
 crossing over and heterochromatin in X chromosome,12554
 crossing over mechanism in σ^6 , 5340
 crossing over and wing development as affected by ultraviolet, 5336
 cytogenetic analysis of 9 inversions,93
 -*D. funebria* hybrids, phylogenetic significance,5337
D. simulans, comparison of salivary chromosomes,7142
 effect on development of "minute" mutations,7135
 effect of lethal deficiency on development, normal embryo at time of hatching,7145
 eye-disk transplantations, *D. pseudoobscura*,90

Drosophila (continued)
melanogaster (continued)
 foods for,10469
 hairy wings, a duplication,7138
 high temperature and bristle frequencies in scute and wild type,8953
 hormones controlling eye color,5649
 hypothesis of gene divergence, 16204
 induced chromosome rearrangements,16163
 inheritance and expression of mottled-eyed mutant,1782
 interaction of eye color factors, 5345
 interaction of some wing mutants,1783
 larvae, ingested, fate of,1515
 mutants and O₂ consumption,16194
 mutation rate and temperature shock,88, 16206
 mutations for sterility,16202
 non-inherited modifications induced by temperature changes,89
 olfactory reactions,443
 origin of attached-X chromosomes, occurrence of non-disjunction of X's in male,1726
 O₂ consumption of pupae, CO as affecting,3785
 relation of food level to rate of development and eye pigmentation,3462
 relation of x-ray dosage to frequency of structural changes in chromosomes,5334
 rôle of cosmic radiation in production of mutations,7144
 structure of ring-gland in normal and lethal larvae,1780
 transplantation of Bar "locus" into vermilion larvae,1781
 transplantation of glass and lozenge eye Anlagen,16198
 transplantation of ovary, effect on crossing-over,7154
 x-ray induced chromosomal alterations,87
 x-ray induced reverse repeat in 3d chromosome,7118
miranda, sex-determining mechanism,7150
pseudoobscura, dominance modifiers of Scute,7141
 gene arrangements in populations of,1775
 genetics of Mexican and Guatemalan populations,8948
 morphological differences in races of,10735
 testis size in hybrids,5350
 transplantation of light and lozenge eye Anlagen,16198
repleta, wing rate, analysis,8762
subobscura, analysis of 3 wild populations,16197
virilis, demonstration of crossing over in salivary chromosome,5297
 inert regions in autosomes,8914
 intersexuality and sex determination,94
 inversion in X-chromosome, effect on non-disjunction,7148
 miniature 9, a new mutable gene, 7137
Drosophilidae (Diptera), p.1877⁴
 Drought. (See also *Hardiness*; *Water relations*.)
 effect on:
 apple crop,8985
 bird population, Wyoming,167
 crops of western Canada,8982
 length of blooming time, corn, 13811
 muskrat populations,5375
 perennial grasses,9038
 stored nutrients in *Andropogon*, 7189
 sp. distr., grasshoppers,1498
 sugar cane vars., Argentina,6461
 evaporation and, Ohio,8992
 in relation to climate and vegetation, U. S. A.,5369
 resistance of Anatolian steppe plants,5379
 of red pine, soil nutrients as affecting,15774
 of soybeans, physiology,14024
 of sweet corn vars., characters associated with,2937
 of wheat, protease activity and,15775
 Drowning, exptl. studies,11046
 Drug(s). (See especially individual drugs, e.g., *Digitalis*, *Epinephrine*, *Ergot*, *Morphine*; and classes of drugs, e.g., *Anesthetics*, *Narcotics*.)
 action, central,9393
 electric potentials and, rat,201

Drug (continued)
 antagonisms, adrenalin-metrazol, 12643
 dinitrophenol-quercitrin, on metabolism,7772, 7773
 epinephrine-acetylcholine, on heart,491
 estrogens-drugs, on smooth muscle,9290
 on iris muscle,4045
 on lung blood vessels,9574
 on muscle,7813
 narcotics-analeptics on soap gel,16765
 picrotoxin-nembutal,534
 on retractor penis muscle,7788
 on sympathetic ganglia,7782
 syntropan-drugs, on digestive tract,14800
 1262F-drugs, on heart,13142
 autonomic, intracisternally applied,2336
 locus of action,5759
 pharm.,4139
 bacteriostatic, for preservation of blood for transfusion,11664
 bioassay, of cathartics in *Daphnia magna*,4164
 fish as test-animals,7793
 rapid evaluation of errors,7794
 of strophanthin, rabbit,7746
 study,13178
 cardiac, structure vs. action,5772
 chemical constitution and pharmacological action, acridine derivatives,7807
 alkoxybenzoates of diakylaminoalcohols,9557
 amines,9538, 9539, 11210, 11212
 cephalotropic,14819, 14820
 related to ephedrine,7789
 barbituric acid series, 16766, 16767
 amylurea compounds and,9550
 carbazole derivatives,7758, 7759
 epinephrine substitutes, 11041, 11216
 β -(2-piperidyl)-ethanol series, 16818
 ethylxanthines,9564
 glycols,16758
 glyoxaline derivatives,14816
 imidazole derivatives,9547
 methoxyphenylisopropylamines,11226
 naphthalene derivatives,13140
 nitrophenols,16775
 organic nitrates,13178
 phenanthrene derivatives,7791
 phenisopropylamines,12643
 phenylethylenediamines,13143
 picoline derivatives,11260
 pyrazoline derivatives,7780, 9567
 review,556
 sulfamides,14835
 sympathicomimetic drugs,14805
 traserin and octin series,7812
 urethane derivatives,11257
 color of, naming,1336
 convulsant and depressant, detn. of activity,935
 cumulative action of cardiac glucosides,9556
 effect on:
 ascorbic acid excretion,13178
 bio-electric potential, rats,201
 blood pigments,13178
 brain potentials,12643
 cardiac refractory phase,13123
 carotid sinus,9519
 after CO poisoning,4080
 cerebral potentials, rabbit,7656
 coronary circulation,12643
 electrogram of hypothalamus,450
 heart, abnormal rhythm and,9513
 nerves,9568
 organs, detn.,5531
 osmotic pressure of organs and blood,16811
 phenobarbitalized heart,9525
 effective dose, calculation of 99%, 4113
 in etiology of agranulocytosis,14934
 "fastness," in bacterial strains, 11594
11595
 habituations, tissue culture study,16785, 16786
 history, in Carolina,1333
 homeopathic, activity tested in humans,5774
 hypersensitivity, to amidopyrine,9848
 irritant action of *Hydnocarpus* preps.,17268
 lethal dose, calculation of 1%,4113
 microscopy, manual,15690
 ophthalmic, effect on pupil of eye, 9560
 osteotropism,16296, 16297
 photosensitizing, in psoriasis therapy,17277

Drug (continued)

- pressor, effect on intestine, adrenal
insufficient cats,12643
resistance to toxic doses, coitus as
affecting,12929
rôle in modifying action of thyreotropic
hormone on structure of thyroid,
.....11414
sensitivity reactions of blood and bone
marrow to,522
sensitization to,873
spasmolytic, effect on cardiopasm,
.....4104
sulfanilamide-related, porphyrinuric
action,17274
sympatholytic, effect on heart,14821
synergy, atropine-barbiturates and
strychnine,5769
HCN-convulsant poisons,5733
morphine-codeine, on resp. tract,
.....5751
physestigmine-strychnine, on blood
sugar,526
on sympathetic ganglia,7782
synthetic, chem. book,16795
in malaria control,1549
tests, in staphylococci corneal ulcers
in rabbits,15261
vasomotor, effect on pulmonary differ-
ential pressures,4071
Drug plant(s). (See Medicinal plants.)
Dry-cleaning fluids, disinfectant efficiency,
.....15341
Drying. (See Curing; Dehydration; Desic-
cation.)
Drymaria (p.1865²) *cordata*, anatomy and
biology,1139
Drymodonta (p.1882²), n. subsp.,7023
Drymogya (p.1867²), n. sp.,6437
Dryobates (p.1881⁴) *borealis*, life hist.,
.....12437
 major, preying on young of *Parus*, 5194
 nanus, subsp., from Siam,8827
 pubescens medianus, life history,12437
 v. villosus, migration in,7026
Dryodon (p.1862²) *coralloides*, development,
affinities,15462
Dryophilum, tax.,13736
Dryopteris (p.1863²), tax., 1097, 1099, 1110
 2517, 2828A, 6376, 8421
 8423, 8424, 4758, 11850
Drypetes (p.1866²), n. sp.,2885
Duck(s). (See also Poultry; and under
genera, e.g., *Anas*.)
 blood serum, serol. comparison with
 hen,905
 breeding and feeding grounds, mosquito
 control as affecting,10434
 cholera, immunization by bacterin, 6121
 chorio-allantois, growth of normal and
 neoplastic tissues on,15078
 virus tissue culture on,4593
 conditioned gastric secretion on acoustic
 stimuli,7526
 in control of snails,12261
 Cu in blood and tissues,12838
 diving, food habits,9065
 eclipse plumage, as stage of double
 molt,14301
 egg production,17094
 egg-white, antigenic action in duck,
 hen and rabbit,905
 game, of U. S. and Canada, food plants,
 9070
 lipid metabolism in,9350
 moulting notes,14302
 nematode parasite,3246
 olfactory formations, structure and
 function,9676
 respiration in,14604
 ring-necked as transient in northeastern
 states,9068
 Salmonella (Breslau) infection in, 6255
 swine erysipelas in,4676
 trematode parasites, Canada,1590
 Michigan,1591
Dugesia (p.1869²) tax.,10541, 17934
 agrina, sexuality,17934
Dugong, dentition,12449
Dumbness. (See Aphasia.)
Dumortiera (p.1863²) *hirsuta*, polyploidy
and geographical distribution,48
Dumont, biography,12476
Dunes, fauna and flora, California,8437
sand, eroded vegetation,131
Duodenitis. (See under Intestine.)
Duomitus ceramicus. (See *Xyletus ceramicus*.)
Duran-Reynals factor, effect on vaccinia
virus,15222
 in fetal and adult guinea pig organs,
 15222
Duranta (p.1867²) n. sp.,2382
 plumieri, alkaloid principal as mosquito
 larvicide,12223

Durian. (See *Durio zibethinus*.)

- Durio zibethinus*, *Pythium* disease of, 12127
† *Duslia*, phylogeny,12333
Dust(s). (See also diseases caused by,
e.g., *Stilicosis*.)
 asbestos, harmful conc.,11371
 atopen, review,8160
 Ba antimonyl tartrate, for control of
 gapeworm, chickens,3253
 cereal-, allergy to,15143, 15144
 effect on prairie vegetation,115
 extracts, of house-, skin-reacting
 potency, detn.,15136
 preservation,15131
 flue, effect on sunflowers and beans,
 4910
 fungicidal and insecticidal. (See under
 Insecticides.)
 house, pinworm ova in,10505
 sensitization of guinea pig to,9837
 industrial, counts, significance,14986
 effect on rabbit's cornea,13281
 vs. Pb dusts, vasophilic erythrocytes
 and,5875
 mortality from pulmonary disease
 and,13280
 relation to tuberculosis incidence,
 13276
 in lungs of gold-miners,7927
 permutite, effect on lungs,11867
 silicate, effect on lungs,11868
Dusting. (See also Fungicides; Insecti-
cides; Spraying.)
 apparatus for, contact insecticides,
 17885
 desiccation by inert materials,12232
 drift in, reduction,17889
 for leaf-hopper control, cranberry bogs,
 6682
 for potato leaf hopper,1499
 sodium arsenite for, uniformity de-
 pendent on particle size, 17888
Dutailleya (p.1866²), n. sp.,4783
Duvaucelia (p.1872²) *plebeja*, larvae, 8746
Duvauceliidae (Mollusca), p.1872²
Dwarfism, due to avitaminosis,4264
 in hereditary ant. pituitary deficiency,
 mice,4283
 hereditary in mice, fasting as affecting
 blood sugar in,7360
 inheritance, rabbit,16199
 pituitary, antuitrin-G as affecting, 9635
 intelligence and,436
 therapy,4284
Dye(s). (See also Indicators; Pigments;
Staining; and under special dyes,
e.g., *Methylene blue*, *Neutral red*.)
 acid, absorption by muscle,2260
 as test of disorders in hemato-
 encephalic barrier,7248
 aniline, bactericidal efficiency,11712
 carcinogenesis and,7824
 azo-. (See also Sulfonamide.)
 in urinary tract infections,11577
 biliary,12882, 12883
 blood-group antisera preserved by,
 15168
 colloidal, fate in circulating blood,
 18413
 conc. in cell, photodynamic hemolysis
 and,10886
 effect on:
 Clonorchis sinensis in vitro,4552
 diphtheria toxin and antitoxin, 8154
 infectious diseases, history,14918
 reticulo-endothelial system in rabbits
 and rats,4316
 elimination in excretory organs,3949
 fluorescein. (See *Fluorescein*; *Mercurio-
 chrome*.)
 fluorescent, demonstration of infectious
 agents by,11575
 effect on frog skin potential,14442
 excretion by liver cells of frog and
 rat,4351
 as gall-bladder antiseptics,13541
 molecular structure, kidney secretion
 and,11090, 12643
 movement in connective tissue,3643
 natural,14441
 permeability of onion cells to, factors
 affecting,3068
 photodynamic. (See also *Photodynamic
 action*.)
 plants used for, Mexico,10294
 proteins, cellular reactions to,13476
 prune pure, absorption by plant cells,
 pH and cations as affecting,
 13973
 reaction with cell surfaces,7997
 redox indicator, x-rays as affecting,
 3578
 spreading factor from serum as affect-
 ing,8105

Dye (continued)

- storage in plant cells, pH as affecting,
.....4922
surgical, effect on bacteriophages, 17283
synergism with paralyzant drugs,535
triphenylmethane. (See *Fuchsin*; *Gen-
tian violet*; etc.)
vital, spread in skin of mice,701
Dyeing. (See *Staining*.)
Dysauzes (p.1877²), tympanal organ
morph.,10617
Dyschoriste (p.1867²), n. sp.,6437
Dysdercus howardii, on cotton, control,
.....12200
 mendesi, inheritance of a melanic form,
 1777
 minulus, damaging cotton,10407
Dysentery. (See also *Diarrhea*.)
 amebic. (See also specific organisms,
 e.g., *Endamoeba histolytica*.)
 chemotherapy,11611
 incidence in acute diarrhea,17914
 thermal treatment,3240
 bacillary. (See also *Dysentery group of
 bacteria*.)
 allergy and desensitization prior to
 serotherapy,17203
 bacteriophage therapy,4590, 8194
 dissemination and control,15294
 prophylaxis by sera and vaccines,
 2532
 review,8237
 bacteriophagy, culture medium for,
 2629
 biological characters of bacilli from
 same case,17301
 bovine chronic. (See *John's disease*.)
 epidemic infantile, classification of bac-
 terial strains isolated,18611
 due to *Shigella paradyserteriae* var.
 Hiss and Russell,17378
 Pseudosalmoneella dysenteroides from,
 17378
 Salmonella morganii strains from,
 biological properties,13612
 fever in *Shigella*-type, inhibition by
 heterobacteria,9378
 of lambs,6241
 paratyphoid-B and, epidemiol. and dif-
 ferentiation in Amsterdam, 6196
 relation to acute diarrhea of childhood,
 17364
 Shiga antisera, titration,13434
 Shigella paradyserteriae causing in
 monkeys,965
 Sonne type, bacteriologic findings in
 epidemic,17290
 specific antitoxins in Shiga-Kruse type,
 925
 Watanabe bacilli from, serological com-
 parisons,2559
Dysentery group of bacteria. (See also
Shigella dysenteriae; *S. paradyser-
teriae*; etc.)
 chronic ulcerative colitis and,13613
 phage activity in lysogenic cultures
 effaced,8200
 variability in vivo,13709
Dysentery-typhoid-colon group of bacteria,
photodynamic action of safranin
on,2687
Dysentery-typhoid group of bacteria, as
influenced by lecithin-broth cul-
ture,17305
Dysodia (p.1867²), n. spp.,15500
Dysosylum (p.1866²), n. sp.,13768
Dyspepsia, *Bacillus acidophilus* in feces of
breast fed infants with,17304
due to fermentation,12889
Dyspnea. (See under *Respiration, alveolar*.)
Dystrophy. (See also *Atrophy*.)
 corneal, ionic medication,3550
 endothelial, inheritance in man, 14378
 hepatic, in piglets after cod liver oil
 feeding,2707
 juvenile adiposogenital, treatment, 385
 muscular, diet as affecting, rabbits
 9218
 path.,7633
 vit. E deficiency and, rat,12868
 wheat germ oils and α -tocopherol as
 affecting, rats,9217
 myotonia, inheritance,8963
Dytiscidae (Coleoptera), p.1876²

E

- Eagle(s). (See also *Aquila*, *Haliaeetus*, and
other genera.)
 golden, in Austria, nesting data, prey,
 5167
 Protocaliphora in nest, Alaska,1564

- martial, parent and nestling of, . . . 5202
 migration, France, . . . 8828
Eanus (p.1876)² hatch, . . . 6877
 Ear. (See also *Deafness*; *Hearing*; *Otoliths*;
Sound; *Vestibular apparatus*; etc.)
 adrenergic fibers, liberation of sub-
 stance acting on intestine,
 rabbit, . . . 12884
 cancer, continued trauma and, rabbits,
 . . . 13218, 13219
 complement titer after surgery in, 2587
 external auditory meatus, racial differ-
 ences in dogs and cattle, . . . 4314
 inflammation and infection. (See *Otitis*.)
 inner, sensory areas, comp. anatomy,
 vertebrates, . . . 11381
 description in birds, . . . 7931
 irradiated, injection of perfusate as
 affecting thyroid, rabbit, . . . 451
 labyrinth, ablation, effect on blood
 pressure, . . . 494
 monauricular threshold after, 7635
 capsule, diet as affecting, . . . 3718
 cochlea, canal in mammals, . . . 16956
 electrical activity after denerva-
 tion, . . . 11130
 electrical reactions, . . . 2205
 fetal guinea pig, . . . 2216
 mechanics, . . . 2215
 pathol. conditions and nerve end-
 ings in, . . . 4001
 potential, chemicals as affecting,
 . . . 7636, 12643
 width of basilar membrane, man,
 . . . 718
 function, analysis, . . . 4031
 function and anatomy, fish, . . . 9457
 reflexes, in topical diagnosis, . . . 4298
 stimulation as affecting liver, . . . 451
 structure in *Mormyridae*, . . . 15001
 types in teleosts, . . . 661
 position, cervical sympathetic stimula-
 tion and, rabbit, . . . 16739
 presbycusis, localization, . . . 437
 sensory areas, ganglion cells associated
 with, vertebrates, . . . 16959
 symmetry for liminal pressure and α
 and β curves, . . . 4005
 tympanic cavity, comp. anatomy in
 reptiles, . . . 19287
 tympanic membrane, absorption on,
 measurement, . . . 4006
 vibration frequencies, . . . 5689
 Earth rays, in relation to tree damage by
 insects, fungi and lightning, 14389
 Earthworm(s). (See also *Lumbricus ter-
 restris*.)
 endoparasitic ciliate in, . . . 10514
 hypoxanthine isolation from, . . . 1916
 locomotory reflexes in, . . . 4044
 pig lungworm larvae in, persistence
 and control, . . . 17915
 poultry cestode uninfected to, . . . 10477
 propulsive forces of locomotory muscles,
 apparatus for measurement,
 . . . 3602
 rôle of Hb in blood, and factors affect-
 ing respiration, . . . 12753
 Earwig(s). (See *Dermaptera*.)
 East, Edward Murray, biography, . . . 1679
 East Coast fever. (See *Piroplasmosis*.)
 Eastwood, Alice, biography, . . . 16136
 Ebenaceae (Dicotyledones), p.1866⁴
 Ebenales (Dicotyledones), p.1866⁴
Eberthella, glucido-lipidic antigens of
Salmonella vs. *Pasteurella* vs., . . . 893
 new forms related to, from intestines
 of rhesus monkey, . . . 8362
 nondialyzable products, specificity,
 . . . 2547
dysenteriae, (See *Shigella* d.)
oedematis, toxin, titration, . . . 17217
sanguinaria, (See *Shigella gallinarum*.)
typhi, immunization to, precipitin vs.
 agglutinin persistence in blood
 in, photometric detn., . . . 6109
 Vi-antigen, presence in paratyphoid-C
 strains, . . . 13475
typhosa, (See also *Bacillus typhosus*;
Bacterium t.; *Eberthella typhi*;
Salmonella t.; *Enteric fevers*;
Typhoid fever; *Widal reaction*.)
 acid agglutinability, . . . 8154
 aerobic metabolism in carbohydrate-
 rich media, . . . 10082
 agglutination phenomena, and factors
 influencing, . . . 8131
 agglutination tests for, with formo-
 lized suspensions, statistics,
 . . . 13448
 specificity and non-specificity, 799
 technic and value, . . . 10005
 agglutinin analysis, clinical signifi-
 cance, . . . 2555
Eberthella (continued)
typhosa (continued)
 antibodies, production, vit. C as
 affecting, . . . 11537
 protection and, . . . 4453
 antigens in, detn. of O and Vi in,
 . . . 13400
 factors affecting, . . . 8131
 O and H, heat as affecting, . . . 13408
 relation to agglutination and active
 immunization, . . . 13446
 antigenic structure, 2555, 2556, 8154
 and relation to pathogenesis and
 immunity, . . . 879
 antisera, prep. of Vi-, O- and H-,
 . . . 2555
 autogenous vaccine, protective power
 in relation to M.L.D., . . . 17159
 bacteriophage typing of strains,
 . . . 13661
 bromine germicidal to, . . . 4668
 dissociative phenomena, . . . 879
 filtrate, leucocidal activity, . . . 15135
 growth, tryptophane as affecting,
 . . . 11790
 H-antigen, effect on agglutination,
 . . . 8131
 heterophile antigen production in-
 duced in vivo, . . . 11534, 11535
 immunization to, by lanolin-antigen
 mixture, . . . 4478
 immunizing antigen, specific somatic
 polysaccharide as, . . . 17215
 immunological properties of glucido-
 lipidic extracts, . . . 13408
 immunological relations of polysac-
 charides of mucoid forms,
 . . . 9374
 as influenced by sulfanilamide, 2654
 by sulfapyridine, . . . 2654
 inhibition of *Shigella* dysentery-in-
 duced fever by minimal
 amounts, . . . 9878
 isolation from excreta, media for,
 . . . 11658
 non-specific local immunity to, 13397
 O-agglutination ability, of fresh vs. stock
 cultures, . . . 17158
 O-antigen, effect on agglutination,
 . . . 8131
 receptor analysis, . . . 4523
 review, . . . 15269
 serological comparison to *Salmonella*
paratyphi, . . . 807
 somatic antigens, chem. and pro-
 perties, . . . 2518
 strains grouped by flocculation pH,
 . . . 8131
 for Gruber-Widal reaction, . . . 798
 sugar-alcohol utilization by, . . . 2757
 sulfanilamide and sulfapyridine in
 exp. infections, . . . 9927
 toxic extracts, effect on blood picture,
 . . . 4512
 toxic receptors, extraction and effects,
 . . . 9827
 type incidence in cases of infection,
 . . . 13661
 types, preservation, . . . 4442
 typing, . . . 4442
 vaccine, acetone-desiccation prep.,
 . . . 17215
 as influenced by strains and prep.
 methods, . . . 17159
 mouse typhoid resistance due to,
 . . . 9829
 variant resembling flavobacterial
 form, H and O antigens
 compared, . . . 6045
 variants, type stability to bacterio-
 phage, . . . 13588
 Vi-antigen, in diagnosis of typhoid
 and carrier state, . . . 8101
 effect on agglutination, . . . 8131
 of fresh vs. stock cultures, . . . 17158
 immunological rôle, . . . 9829
 in recently isolated strains, . . . 4494
 stability in vaccines, . . . 17190
 toxicity and, . . . 17159
 in typhoid sera, . . . 4494
 Vi immunizing value, . . . 4453
Ecdasma (p.1878³), morph., phyl., . . . 1632
Ecdysis, (See *Molting*.)
Echelidae (Pisces), p.1879²
Echinidae (p.1882²) *aculeata*, brain, cerebral
 cortex and pyramidal tract, anat-
 omy, . . . 16973
Echinasteridae (Echinodermata), p.1872¹
Echinidae (Echinodermata), p.1872²
Echiniscus (p.1874⁴), n. ssp., . . . 6861
granulatus, asymmetric forms, . . . 6862
Echinocereus (p.1866⁸), n. sp. and key,
 . . . 1137
Echinococcosis, diagnosis, by rabbit cysti-
 cercus antigen, . . . 17240
 disseminated, . . . 10513
 exptl. secondary, in rodents, . . . 12248
 of horse, exptl. infection in mice, 10486
 rare sites, Turkey, . . . 10482
 resistance of rabbit to, . . . 1550
Echinococcus, (See also *Cyst*; *Cysticercus*;
Hydatid; *Taenia*.)
 infectivity for rodents, . . . 12248
 of sheep, . . . 5091
granulosus, in animals, need for data,
 . . . 15969
 in dogs, . . . 10480
 liver lesions, ruminants and swine,
 . . . 12260
Echinodermata, p.1871²
Echinoderm, egg, division, aspects, . . . 175
Echinodermata (p.1871²), egg, cell division
 study, . . . 175
Echinoidea (Echinodermata), p.1872²
 from Bavaria, Jurassic, . . . 15943
Echinoparyphium (p.1869³) *elegans*, in *Anas*
rubripes, Canada, . . . 1590
Echinostoma (p.1869³) *ilocanum*, in man,
 Java, . . . 17911
revolutum, in ducks, . . . 1591
 larval stage, . . . 3279
 new *Cercaria* spp. from, . . . 17946
Echinostomiasis, in man, endemic, Java,
 . . . 17911
Echinostomidae (Platyhelminthes), p.1869³
Echinozoa (Echinodermata), p.1872²
Echinus esculentus, biophysics of egg sur-
 face during fertilization and cytop-
 lysis, . . . 5474
Echiurida (Annelida), p.1871⁴
Echiuridae (Annelida), p.1871⁴
Echiurus (p.1871⁴), larva, cited appa-
 ratus, . . . 6808
Eclampsia, (See also *Convulsions*.)
 etiology, . . . 7597
 -like syndrome in pregnant animals
 after renal artery constriction,
 . . . 414
 pre-eclampsia and, antidiuretic sub-
 stance in urine in, . . . 9409
 vasopressin as a diagnostic aid, . . . 9422
 Eclasion. (See *Hatching*.)
 Ecological equilibration. (See also *Popu-
 lations*.)
 control of fish predators at rearing
 stations, . . . 14413
 effect, of man's activity on plant com-
 munities, Russia, . . . 3512
 of predator on insect population,
 . . . 1487
 phytophagous insects and their preda-
 tors in tropical forests, . . . 8977
 predation on hares and grouse during
 cyclic decimation, . . . 14485
 predator control policy in National
 Parks, . . . 14429
 predator-prey relationship, . . . 1882
 Kansas, . . . 5378
 Ecology. (See also *Alpine*; *Atmosphere*;
Community(ies); *Humidity*; *Light*;
Limnology; *Phytogeography*; *Succession*;
Symbiosis; *Temperature*; *Vegetation*;
Zoogeography; etc.)
 animal, books, . . . 112, 5376
 of German fauna, program for study,
 . . . 12579
 of granary beetle, . . . 5047
 human, artificial climate and, book,
 . . . 16232
 of negro in U. S. A., . . . 6210
 in relation to climate, book, . . . 8980
 to environment, book, . . . 12565
 instruments, atmometer, calibration,
 . . . 3490
 evaporation from, . . . 10758
 automatic plankton net, . . . 14403
 dew-point hygrometer for low temps.,
 . . . 10764
 for light measurement in lakes, 10760
 thermometer for leaf temp., . . . 10754
 use of tensiometers in research,
 . . . 12600
 of invertebrates, of Pacific Coast, 7072
 laboratory guide of deciduous forest
 fauna of N. A., . . . 10772
 methods, . . . 9034
 for detn. of O₂ in field, . . . 3527
 in paleobotany, . . . 4723
 pelagic, integration of plankton com-
 munities and, . . . 5391
 plant and animal, concepts, book, 12564
 principle of relative optimum in, . . . 103
 schools, . . . 9011
 in selection of species for afforestation,
 . . . 15638
 surveys, infra-red photography as aid
 in, . . . 12591
 wildlife, range essentials, . . . 13, 10828

Economic factors, in cardio-vascular diseases, 995
 in metabolic diseases, 986
 in renal diseases, 995
 socio-, relation to respiratory disease mortality, 6209
 Economic plants. (See under Plants.)
 Ecotype(s), of Anatolian steppe plants, 5379
 relation to species, 5266
 review, 9035
 Ectocarpaceae (Algae), p.1860³
Ectocarpus (p.1860³) *nanus*, 2793
 Ectoderm. (See *Germ layers*.)
Ectopistes (p.1881³), food habits, 9064
Ectoprocata (Bryozoa), p.1871⁴
Ectotrichophyton mentagrapites var. *chibaense*, from surfers foot, 13623
 Ectromelia, virus, microscopic study of tissue-cultured, 4593
Ectropodon (p.1863⁴), tax. note, 11845
 Eczema. (See *Dermatosis*.)
 Edema. (See also *Dropsy*.)
 in beri-beri, importance, 4258
 in chronic pemphigus, hypoproteinemia and, 4242
 effect on dye movement in connective tissue, 8643
 on skin distensibility, 241
 erythema, pain sensation of skin and, 5698
 factors in, 7245
 fluid. (See *Ascites*; *Erythrae*; *Peritoneum fluid*; *Pleura fluid*; etc.)
 gas. (See *Clostridium* spp.)
 of nephritis, salts as affecting, 2134
 nutritional, in children, Egypt, 2350
 O₂ supply and, frog web, 258
 pulmonary, treatment by positive pressure respiration, 11043
 vagotomy and, 7864
 Edentata (Mammalia), p.1882³
 Edestidae (Elasmobranchii), p.1879¹
 Edestin, sulphydryl groups in, 7284
 Edington, James William, biography, 16137
 Education, and heredity, 1795
 importance of parasitology, Italy, 6750
 plant physiology, teaching method in, 4958
Edwardsina (p.1877²), larvae and pupae, 3338
 Eel(s). (See also under genera, e.g., *Anguilla*.)
 fats, environment as affecting, 10052
 Greenland, identity and range, 3382
 Eelworm(s). (See under *Nematoda*; and under genera, e.g., *Heterodera*, *Ditylenchus*.)
 Efficiency, of work. (See under *Work*.)
 Effort syndrome, etiology, 372
 Effusan, effect on pollen germination, forest trees, 8573
 Effusions (serous), tumor cells in, 5812
 Effagropil, comp., 16558
 Egg(s). (See also *Cleavage*; *Development*; *Embryo*; *Fertilization*; *Germ cell*; *Hatching*; *Oogenesis*; *Ovulation*; *Parthenogenesis*; etc.)
 albumen. (See also *Albumin*, *egg*.)
 anaphylaxis in monkey induced by, 6062
 globulins in, 9822
 immune precipitate of antisera to, precipitin isolation from, 8124
 index, time and temp. as affecting, 4428
 nutritive value of firm and watery, 7401
 precipitin formation and transmission to offspring, 8155
 bird. (See also under *Birds*.)
 serol. differentiation of spp. by antigens, 17202
 size of sets, American eider, 5421
 crustacean, interfacial tension of intracellular oils, 10839
 development, of bruchid differential susceptibility to KCN during, 765
 centrifuging as affecting, nudi-branches, 8054
 cytoplasmic components and inclusions, guinea pig, 2466
 electric grounding as affecting, silk-worm, 8096
 mineral salts absorbed during, *Malacemys*, 12823
 rhythmic movement during, *Coregonus*, pike, 15065
 temp. as affecting, *Paratritia*, 8984
 of *Triturus torosus* during 1st week, 7114

Egg (continued)
 differentiation without cleavage, zebra fish, 13326
 dividing, hydrostatic pressure as affecting, *Arbacia*, 4388
 embryo position, relation to mortality, 784
 of *Fasciola hepatica*, origin of shell, 14192
 fertilized and artificially activated, cytol. changes in vivo and in vitro, rabbit, 17052
 formation in *Gallus*, 5945
 frog, localization of neural inductor and tail mesoderm, 758
 pituitary extracts as affecting, 7543
 of game birds, artificial incubation, 14437
 human, Edwards-Jones-Brewer, descr., 730
 maturation after explanation, 12643
 parthenogenesis in, 9427
 unfertilized tubal, descr., 7595
 as influenced by centrifugation, cytoplasmic components, *Cavia*, 1716
 by x-rays, *Unio*, 16326
 Mg action on ultraviolet stim., *Nereis*, 7257
 marine, acids as affecting life span, 12659
Urechis, 175
 cell division study, 7249
 cytoplasmic contents, volumes, 7249
 as influenced by Ra, *Pseudocentrotus*, 12699, 12705
 by ultraviolet, *Urechis*, 12686
 permeability, 10844, 16303
 polar spindles, centrifugation as affecting, 12512
 sensitivity to ultra-violet radiation, 766
 membrane, biophysics during fertilization and cytotoxicity, *Echinus*, 5474
 of mink, 16 hrs. after ovulation, 782
 of *Mastella vision*, 59
 nuclear and chromosomal vol. after multiple successive mitosis, 15062
 without nuclei, fertilization and development, 767
 orthopteran, enzymes in developing, 1889
 tyrosinase in, x-rays as affecting, 12704
 ultraviolet as affecting, 1904
 polarity, pH as affecting, *Fucus*, 3098
 light as affecting, *Cystoseira*, 1386
 poultry, air space, changes during incubation, 2116
 bacteriology, 10043, 10044
 breed variations in, 15115
 CO₂ equilibria, 9821
 chem. comp., diet and storage as affecting, 2511
 composition, comp. of uterine secretion and, 412
 deterioration from feeding cottonseed products, causes, 15118
 dietary protein level, effect on body wt. and egg wt., 788
 fertile, storage, 9823
 freshness, measurement, 11508
 growth, 13388
 hatchability, pheasants, 5416
 relation of physical measurements to, 17108
 hatchability and fertility, single-cereal ration as affecting, 15112
 in incubators, humidity measurement, 785
 infertile, early identification, 791
 incubation as affecting, 4422
 quality, high temp. as affecting, 6022
 intrafollicular, unruptured, 15117
 mold formation on, 4427
 oil, vit. D in, 343
 P compounds in, origin, 4425
 preservation, microbiology in, 10044
 production, in battery laying cages, ducks, 17094
 battery vs. outdoor laying pens, 4424
 breed differences, 787
 economic aspects, in Canada, 11507
 energetic efficiency and, 7398
 fertility and, 4421
 as influenced by:
 constant temp., 17098
 grain vs. non-grain ration, 794
 lengthening of daylight period, 11504
 sudden feed changes, 17112
 thyroidectomy and thyroxin, 14652

Egg (continued)
 poultry (continued)
 production (continued)
 protein level and, 6013
 protein supplements and, 6019
 of turkeys, factors affecting, 11503
 winter pause, frequency and duration, 17101
 quality, as influenced by:
 green feed, 6023
 resection of part of oviduct, 5666
 time and temp., 4428
 riboflavin content, relation to hatchability, 15116
 shell, amt., relation to breed variation, 15115
 quality, Mn deficiency as affecting, 11511
 thickness, inheritance, 6025
 size of clutch and position of egg in clutch, relation to hatching, 17095
 storage, paraffin oil and, 2513
 partially sealed, 9824
 tainting by volatile products of oranges, 10042
 textbook, 2506
 trace elements in, 263
 vit. A in, detn., 3713
 vit. D in, 343
 yolk, Ca in, fresh vs. stored, 6017
 color layers in, 11509
 estrogen content, 3787
 lipid growth factors for tubercle bacillus from, 6298
 P in, fresh vs. stored, 6016
 in serodiagnosis of fowl paratyphoid, 2603
 production, rate, in *Strongylus*, 1543
 recovery from x-rays, temp. and, *Ascaris*, 14465
 response to stimulation, *Arbacia*, 8059
 segregating substances in developing molluscan, 770
 shape, variation in schistome, 6790
 of snake, measurements, 3401
 transport as affected by estrogen, ovariectomized mice, 5681
 unfertilized *Chaetopterus*, staining by neutral red, 176
 uterine, development in vitro, 8048
Ehretia (p.1867²), n. sp., 2882
Ehrharta (p.1864³), n. spp., 15483
 Eig, Alexander, biography, 30
Eimeria (p.1868⁴). (See also *Coccidiostoma*)
 new spp., 3271, 6762, 6770, 8204
 12276, 14202, 14204
 sulfanilamide effects on spp., 15200
augusta, in grouse, 14202
bukidnonensis, in cattle, 17892
tenella, oocysts, viability, 6725
Eimeriidae (Protozoa), p.1868⁴
Eisenia (Algae) (p.1860⁴) *arborea*, culture studies and life history, 6328
Eisenia (Annel.) (p.1871⁴), n. sp., 6811
 anterior regeneration, role of nerve cord in, 5968
Wönnerbergi, endoparasitic ciliate in, 10514
Metaradiophrya from, 1575
 Elachistaceae (Algae), p.1860³
Elaeagnus angustifolia, nitrogen excretion from bacterial nodules negative, 2741
Elaeas. (See *Palm*, oil.)
 Elaeocarpaceae (Dicotyledones), p.1866²
Elaeophorbia (p.1866²), new and little known African spp., 1127
 Elaidic acid, metabolism, 7441
 Elaidin, absorption and deposition, 7442, 7443
 Elaidin, 7442, 7443
 Elaioplasts. (See *Plastids*.)
Elaphs obsoleta, new genus of chigger from, 3314
Elaphodus (p.1883⁴) *cephalophus*, autoecology, in Tibet, 5223
Elaphoglossum (p.1863²), n. spp., 1097
 8421
isabelense, in Rhodesia, 8423
Elaphomyces (p.1862²) *appalachiensis*, 17491
 Elaphomycetaceae (Fungi), p. 1862²
 Elapidae (Reptilia), p.1880⁴
Elasmobranchii (p.1878³). (See also *Rays*; *Sharks*.)
 color changes, theories, 11073
Elassogaster (p.1877⁴), n. sp., 14254
 Elastic tissue. (See *Connective tissue*.)
 Elasticity, superficial, detn., 16388
 Elastin, comp., 4362
 Elastometer, fluid, descr., 3613

- Elateridae (Col.), p.1876². (See also *Wireworms*.)
on maize, crop rotation as affecting,17865
- Elateroidea (Coleoptera), p.1876²
Elatineaceae (Dicotyledones), p.1866²
Elatine (p.1866²) *triandra*, v. *major*, 2886
Elatostema, photosynthesis in,17709
† *Electra* (p.1877³), tax.,6945
- Electric animals. (See under various genera, e.g., *Torpedo*.)
Electric charge, of toxins, effect on permeability of C-N-S barrier to,11529
of trypanosomes, in tsetse fly,6718
Electric conductivity. (See *Electric resistance*.)
Electric current. (See also *Electricity*; *Stimulation*.)
alternating, effect on excitability of nerve,4025
response of amoeba to,7605
anesthesia due to, 14466, 14475, 16696
effect on electric potentials, bean plant,15756
high frequency. (See also *Diathermy*; *Electric field, high frequency oscillating*.)
induction shocks, effect on conduction from A-V node,4074
on ventricles,4075
insulation from earth, effect on growth, rat,3710
effect on malignancy of inoculated tumors, rats,4224
interrupted direct, apparatus for, 16714
linearly increasing, stim. of *Paramecium* by,10841
tension, hydrocarbons as affecting,11302
transport of ions through tissues by. (See *Dielectrolysis*.)
tropic responses to. (See *galvanotropism* under *Tropisms*.)
Electric field, effect on seed germination and silkworm development,3096
high frequency oscillating. (See also *Diathermy*.)
effect on:
blood enzymes,1898
heart contraction,14464
metabolism, man,274
protozoan infections,1557
tumors,7282
physics, manipulation and biological applications, book,9105
therapy, biophysical basis,12703
radiations used in destroying insect pests,1526
Electric impedance of skin in dermatoses,9665
Electric polarity, exercise and rest as affecting,12643
in fish and man,12643
Electric potential(s). (See also *Action current*; *Membrane, potentials*; *Oxidation-reduction, potentials*; *Polarity, electrical*.)
of body, temp. as affecting,203
of brain, man,7069
in choroid plexus secretion, 1964, 1990
delayed K effect, *Nitella*,1365
of digestive tract during motility, 14740
effect on distr. of growth hormones,12069
on ion mobility, *Halicystis*,3076
Nitella,3070
of frog-skin,180
iodoacetate as affecting,9078
of hemolytic streptococcus cultures, sulfanilamide as affecting, 6139
as influenced by:
drugs, rats,201
electric current, bean plants,15756
fever, mice,203
heteroauxin, *Didymium*,15718
light and O₂, *Chara*,4952
non-electrolytes, *Halicystis*,4923
of retina, nicotine as affecting,440
in *Valonia*,15723
of wound healing,200
Electric resistance, bacterial metabolism studied by,2745
in *Nitella*, during activity,1391
Electric shock. (See under *Electric current*.)
Electric short waves. (See *Electric field, high frequency oscillating*.)
Electrocardiogram. (See under *Heart*.)
Electrocardiography. (See *Galvanometer*; *Heart, electrocardiogram*.)
Electrocautery, in therapy of tuberculous tracheobronchitis,13245
Electrodes, dropping Hg, for detn. of O₂,5499
for localized stimulation and electrocoagulation and for recording brain potentials,3610
of 3rd kind, descr.,14483
Electrodialysis, effect on seed viability, pea,17674
Electroencephalogram. (See under *Brain*.)
Electrography,14315
Electrokatadyn, disinfection method, 2674
Electrokinetic potential of starch,9087
Electrolysis. (See *Dielectrolysis*.)
Electrolytes. (See also *Acids*; *Alkalies*; *Anions*; *Cations*; *Ions*; *Salts*; and specific ions, e.g., *Calcium*, *Potassium*.)
absorption by cells, factors affecting, *Allium*,13993
accumulation in cell sap, *Valonia* and *Halicystis*,3071, 3072
balance, effect on excretion of anti-diuretic substance, adrenalectomized cat,12643, 12974
as influenced by fever,5657
by lymph heart destruction, frog,16406
in renal insufficiency,16646
in blood. (See under *Blood*.)
effect on muscle, *Mytilus*,13098
excretion, as influenced by low Na and K diets, rat,7246
by salts, adrenalectomized rats,7247
organic, effect on membrane potentials of muscle and nerve,9079
penetration into algae, kinetics, 15724
in *Thyone* muscles,12643
Electromagnet, signals, physical latent period,3609
Electrometer, in detn. of spoilage in fish,10040
Electromotive force. (See *Electric potentials*.)
Electron tube for production of cathode rays from 1-15 kv.,7281
Electrona (p.1879³) *crockeri*,16049
Electrophoresis. (See *Cataphoresis*.)
Electrostatic field, use in destroying soil insects,1526
Electrotherapy. (See *Electric current*; *Heat*; *Lamps*; *Light*; etc.)
Eledone (p.1872⁴) *moschata*, salivary glands, histology,703
Element(s), biological essentiality, relation to atomic structure,3057
radioactive isotopes, absorption rates in man,3546
trace, in plant nutrition. (See under *Minerals, nutrition, plant*.)
rôle in agriculture,1198
Eleotridae (Pisces), p.1880³
Elephant. (See also *Elephas*.)
Asiatic, fetus, anatomy,5947, 5948
breeding in captivity,10668
electrocardiogram,4098
heart, anatomy,4322
Indian, pituitary gland structure, 15026
physiology,5213
pregnancy and parturition,10668
Elephantiasis. (See *Filariasis*.)
Elephantidae (Mammalia), p.1883³
Elephantomyia (p.1877³), n. sp.,14251
Elephas (p.1883³). (See also *Elephant*.)
antiquus ruthenensis,5210
trogotherit, descr.,16110, 16113
Elettaria cardamomum, culture and vars.,13896
Eleusine coracana, sap composition, fertilizers as affecting,3056
Elicaceae (Dicotyledones), p.1866²
Elk. (See also *Alces*; *Moose*.)
muscle cysticerci in,5096
"Stangen" types of antlers, origin, distr., causes,10660
Ellantonematidae (Nematoda), p.1870¹
Ellipioa athasaria, larvae of, wt. as affected by sun vs. shade leaves as food,5053
Ellipsoidon † (p.1883³), n. sp. (E),18094
Ellisia (p.1867³), spp. referred to, 17520
Elm. (See also *Ulmus*.)
American, Jap. beetle on, control, 12236
Ceratostomella ulmi on, correlation of external and internal symptoms,12129
eradication progress in U. S. A.,1454
infection and resistance,14089
inheritance of resistance,14082
investigations in Holland,15853
localized infection in borer wounds,15811
official control progress, Netherlands,3144
quantitative detn. of susceptibility,3169
resistance tests with seedlings, 4998
status in Belgium,14096
in U. S. A., 1938,3148
dieback (*Dothiorella ulmi*), pathogenicity,10346
disease, report of committee investigating,1759
fall cankerworm control, N. B.,10425
hybridization, technic and preliminary results, Holland,4988
injuries due to *Scolytus multistriatus*, factors in variation, 1933-37,14137
leaf beetle, *Tetrastichus* sp. parasitic on,3204
leaf spot (*Gnomonia ulmea*), general account,1424
wilt, fungi associated with,1426
Elm bark beetle, development,10426
Elm borer. (See *Saperda tridentata*.)
Elm leaf beetle. (See *Galerucella*.)
ELOCINCLA (Aves) (p.1881⁴), *aenigma*,10647
Elodea, electric charge,7252
permeability of membranes, light as affecting,13991
plasmolysis forms in,6581
canadensis, photosynthesis in, quanta effects,12087
protoplasmic streaming in, hydrostatic pressure as affecting,6580
Elonichthys (p.1879³), (†) tax., 8813, 16053
Elopidae (Pisces), p. 1879¹
Elops (p.1879¹) *saurus*, scales, and errors in age detn.,18045
Elphidium (p.1868⁷) †, tax.,14199
Eltsinoë (p.1861⁴), hosts and distribution,2798
fawcetti, on grapefruit,14037
Elymoside, from *Elymus* spp., comp., and isolation,8595
Elymus (p.1864³), n. syn.,11158
elymoside formed by, composition and isolation,8595
susceptible to Hessian fly,17872
Elytraria (p.1867⁷), n. sp.,2864
Emarginula (p.1872¹), (J), n. sp.,15943
Embedding. (See also *Microscopical technic*.)
combined celloidin-paraffin method,9711
Fucus, use of dioxan in,16122
of materials in non-aqueous solns., tissue changes in,9712
plaster of Paris boxes for,5264
in soap-wax, technic,5263
of tissues, method,11431
Embenza citrinella, nest,18063
Emberiza hortulana, habits,16070
Embia (Rhagadachir) *argentina*, new interm. host. for *Hymenolepis*, 14192
Embiidina, p.1875¹
Embioptera, evolution and phylogeny dist.,6942
Embolism, histamine liberation during,16438
pulmonary, electrocardiogram in, 11173
thrombo-, of carotid artery effect on brain,14763
Embolus(i). (See also *Thrombosis*.)
air, in artificial pneumothorax,16584
Embothrium (p.1865⁹), n. spp.,11883
Embryo (animal). (See also *Cleavage*; *Development*; *Egg*; *Embryo*; *Embryology*; *Fetus*; *Morphogenesis*; *Ontogeny*; etc. under animals commonly used in embryological work, e.g., *Chick*, *Pig*, etc.; and under special organs, regions, etc.)
amphibian, triple stain for,17003
ansa of Wrisberg, connections,681
blastopore, factors necessary for development, *Rana*,736
body growth changes in relation to development of lymphatics,9686
clearing for demonstration of bone,7990
development, after constriction of cells during cleavage, *Psammochinus*,9738
density changes during,4385
duodenum, rotation during,8039
of fat body, crocodile,15067
in ovarian follicles, *Lebistes*,11445
rate, temp. as affecting, terrapin,15074
of rectal columns,11378
regulatory capacity after injury, *Ephestia*,9791
in vitro, mammals,8048
differentiation,11446
of ear ectoderm, Amphibia,4393
of transplanted genital primordia, sex hormones as affecting, 12643

- Embryo (animal) (*continued*)
 distr. of respiratory intensities, *Ambystoma*, 4378
 embedding, soap-wax technic, 5263
 endocrine glands, adrenalectomy as affecting, rats, 15025
 extracts, development of oocytes in, 13380
 fetal membranes in *Citellus*, 4381
 fibrillogenesis in connective tissue, pig, 15063
 formation of umbilical cord and umbilical region of ant. abdominal wall, 17046
 gastrula, metabolic regions, amphibians, 753
 gastrulation, forces causing in
 Dendroaster, 17050
 in reptiles, 11444
 human, development of atrio-ventricular valves, 17042
 Edwards-Jones-Brewer, review, 730
 erythroblasts in chorionic blood vessels, 2161
 hematopoiesis in, 4317
 hypoglossal nerve in, origin, 15066
 10 somite, neural crest, 17036
 tendon of lateral pterygoid muscle, attachment, 708
 teratology, 11461
 juice, fibroblast growth in, 9766
 mammalian, occurrence of Ackernicht organ in, 7929
 relation of pericardial sac to diaphragm, 7930
 sexual differentiation, 15079
 minced, in tissue culture of virus, 4586
 of mink, 732
 mitotic cycle in blastula of *Bufo*, 17037
 myocardium, innervation, 9689
 normal, at time of hatching, *Drosophila*, 7145
 organ's, differentiation, analysis by mitotic index, 5949
 organization, genes and, 11441
 origin of sheath cells of Schwann, 13324
 parthenogenetic, germinal segregation, 16378
 resorption, induced by aldehydes, mouse, 13032
 sex development, estrogen as affecting, 12643
 10 mm., of *Myrmecophaga*, with placenta, descr., 17045
 tissues, lactoflavin and cytochrome C as affecting, 13232
 yolk sac of duck, *Rickettsia* cultured on, 4582
 Embryo (plant). (See also *Polyembryony*; *Seed*; *Seedling*.)
 cotyledon, regeneration of roots from, alfalfa, 15792
 stomatal anomalies in *Pinus*, 2911
 of fruit trees, culture on nutrient agar, 8005
 of *Garra c. cyprinensis*, 6959
 growth, as influenced by:
 ascorbic acid, 3088
 tryptophane, bean, 14006
 vit. B₁ and nicotinic acid, pea, 4926
 rejuvenation, note, 1741
 suspensor, *Actinostrobilus*, 1164
 Embryo sac. (See also *Embryogeny*; *Endosperm*; *Gametophytes*.)
 degeneration in *Ranunculus*, 6449
 development, in *Artemisia*, 4808
 colchicine as affecting, *Tradescantia*, 1712
 defective, in rye, 16175
 in *Euphorbia*, 2913
 in *Phytolacca*, 17553
 in *Straza*, 4805
 in *Tinospora*, 11920
 Embryogeny (plant). (See also *Embryo* (plant); *Embryo sac*; *Endosperm*; *Fertilization*; *Ovule*; *Polyembryony*; *Seed*.)
 in *Actinostrobilus*, 1164
 in *Boerhaavia*, 1171
 in *Bryonia*, 11930
 comparative anatomy and phylogeny in vascular plants, 2905
 in Goodeniaceae, 4812
 in *Herniaria*, 2914
 in *Juniperus*, 10165
 in *Lycopodium*, 2915
 in Myoporaceae etc., 4806
 in Ranales, 4809
 in *Saxagothaea*, 11915
 in *Segueta*, 10163
 Embryology (animal). (See also *Development*; *Embryo*; *Morphogenesis*; etc.)
 of arthropods, review, 3312
 of *Bombyx*, genetic constitution of mosaics and, 7146
 causal, review, 8033
 developmental mechanics, book, 13325
 germ cell line, review, 729
 and histology, of teeth, book, 4307
 methods for study of marine eggs, book, 13344
 of opossum, book, 735
 principles of development, book, 15069
 rôle of nucleus in metabolism of egg and morphogenesis, book, 15059
 terms in, origin and pronunciation, 10692
 text book, 731
 transplantation, book, 5952
 Embryology (plant). (See *Embryo* (plant); *Embryo sac*; *Embryogeny*; *Endosperm*; *Ovule*; *Polyembryony*; *Seed*.)
 Emericella (p.1861²) varicolor, conidial stage, 13731
 from olives, 13731
 Emesis, glycoside, origin, 12643
 hyper-, gravidarum, blood Cu in, 12325
 Emetic(s) carbazole derivatives as, 7758
 lobelia alkaloids as, 4147
 Emetine, in amoebiasis therapy, 11611
 and bismuth iodide, assay, 5752
 effect on *Endamoeba histolytica*, 15210
 Emmalocera depressella, *Stenbracon deesae* on, 1522
 Emotion, in bronchial asthma, 7907
 effect on:
 blood Ca and coagulation, 13178
 electrogram of hypothalamus, 450
 heart rate in sympathetomized dogs, rôle of vagus in, 11076
 finger oscillations as indices, 7608
 hyperglycemia and hyperthermia due to, tropical animals, 9142
 inheritance, rat, 1768
 marihuana as affecting, 14792
 Emphysema, alveolar O₂ in fractional samples, 5607
 diagnosis and treatment, 11042
 effect on pulmonary capacity, 369
 mediastinal, as complication of artificial pneumoperitoneum, 12918
 spontaneous, review, 12923
 pulmonary sclerosis and, 7713
 surgical, x-ray study, 3776
 Empidonax (p.1831⁴), food habits, 9064
 Empoasca (p.1875⁴), n. spp., 10604, 18017
 spp., on cotton, Sao Paulo, 12198
 fabae, on potato, control, 12197, 17873
 on potatoes, control, 1499
 radiata group, monograph, and n. spp., 18021
 Empusa (p.1861²) gryllis, on grasshoppers, natural and exptl., 10457
 Empusaceae (Fungi), p.1861²
 Emulsin. (See under *Enzymes*.)
 Emulsion(s). (See *Colloids*; *Sprays*, oil.)
 Emydidae (Reptilia), p.1850³
 Enallagma (Spermat.) (p.1867²), n. sp., 2882
 Enallagma (Insecta) (p.1875²) basidens, in Ohio, 3360
 Enamel. (See under *Teeth*.)
 Encalypta (p.1863²), n. sp., 4748
 Encalyptaceae (Bryophyta), p.1863²
 Encarsia (p.1878²), formosa, in biol. control of greenhouse white fly, 3207
 Encephalartos gratus v. manikensis, in Rhodesia, 8428
 Encephalitis. (See also *Herpes*.)
 apo-atropine as affecting, 517
 in Brazil, 17288
 clinico-pathology, 629
 and complications, statistical, epidemiol. and immunol. study, 15308
 effect on childhood behavior, 11272
 enzootic. (See *Borna's disease*.)
 epidemic, relation to Landry's ascending paralysis, 2410
 epidemiology, of St. Louis type in California, 15351
 fox, comp. histopathol. of canine distemper and, 6240
 inclusion bodies in, 6168
 Gordon's agent, nature, 2613
 human infection, from equine encephalomyelitis virus, 629, 15239
 from horse, 8217
 immunization, by nasal instillation of nasopharyngeal washings from St. Louis-strain cases, 15250
 Japanese epidemic, mosquito transmission, 952
 lethargic. (See *Encephalitis epidemic*.)
 leuko-, moose, etio-path., 14915
 Encephalitis (*continued*)
 Listerella associated, in cattle and sheep, 11736
 periaxialis, chronic progressive degenerative encephalopathy, case, 16910
 clin-path., 14922
 post-measles form, specificity, 15242
 relation to equine encephalomyelitis, 618, 2614
 St. Louis strain, virus spread in nerves and affinity for gonads, 9947
 schizophrenia due to, 2412
 sequelae, precipitation reactions, 2418
 virus. (See also *Herpes virus*.)
 epidemic, spontaneous in stock mice, 13565
 equine encephalomyelitis induced by human, 13580
 guinea-pig inoculations, 15251
 isolations in epidemic, 13587
 presence in upper respiratory-tract secretions, 15250
 St. Louis strain, chorioallantois culture, effects, 6164
 neutralization by sera from children, 2581
 pregnancy as affecting immunity to, 7588
 preservation by freezing and drying in vacuo, 15253
 propagation in mouse testicle, 11617
 survival, in rat and guinea pig brains, 11620
 wild mice susceptible to, 15226
 tissue culture, St. Louis vs. Japanese strains, 15247
 in wild mice, spontaneous infection, 15227
 Encephalomalacia, nutritional in chicks, prevention, 2403
 thrombo-embolism of carotid artery and, 14768
 Encephalomyelitis. (See also *Louping ill*; *Poliomyelitis*.)
 disseminated, vs. multiple sclerosis, 16908
 path., dog, 16899
 enzootic. (See *Borna's disease*.)
 epizootics, 11725
 equine, antisera, constituents, method as affecting, 885
 as cause of human encephalitis, clinico-pathology, 629
 eastern form, human infection by virus, 8217
 intraocular exp. infection with fixed virus, 11627
 pathogenesis, 11626
 pigeon infection, 4604
 epidemic and etiological relations, 11752
 epidemiology, 15256
 human encephalitis virus causing exp., 13580
 immunization, by "chick" vaccine, 15255, 15256
 by pigeon-passage virus, 6172
 in man, 15231, 15234, 15239
 mosquito transmission tests negative, 8217
 pathogenesis, 834
 relation to human encephalitis, 618
 review, 15255
 in ring-necked pheasants, 1018
 serum protection test, route as affecting, mechanism, 834
 susceptible avian hosts, 1018
 tissue-cultured vaccine, potency, 9904
 virus, antigenic stability of western, 13557
 inactivation rate, pH in tissue culture as affecting, 947
 pigeon-brain passage as affecting, 6172
 protective antibodies in laboratory workers against, 13463
 recovery from human encephalitis cases, 13585
 of western type from brain of child, 13564
 strains compared, 948
 tissue culture on chick embryo, 9904
 Venezuelan strain compared, 955
 immunization by chick-embryo vaccine, 11725
 induction by intestinal filtrates of affected vs. apparently normal mice, 15241
 Listerella associated, in cattle and sheep, 11736

- measles-complicating, specificity, 15242
mosquitoes as vectors, 2614
postmeasles, sequelae, clin., path., 16344
Encephalopathy, after anesthesia, hist.,
..... 16947
chronic hypertensive, essential hyper-
tension and, 11171
chronic progressive degenerative, path.,
case, 16910
due to bone marrow extract and Hodg-
kin's nodes, 14982
spontaneous, vascular, in children, clin.,
path., 16821
Wernicke's, etiology, 7904
Enchelinidae (Protozoa), p.1868³
Enchophora (p.1875³), n. sp., 6916
Enchytraeus albidus, regeneration experi-
ments, 6809
Encyrtid. (See *Diversinerosus*)
Endomoeba (p.1868³), in Japanese beetle,
..... 1580
coli, cysts, passage through stomach,
rat, 8712
incidence, Cuba, 6720, 6741
incidence, Florida, 14162
incidence, Indiana, 14176
incidence, Saskatchewan, 17905
histolytica. (See also *Dysentery*, amoebic.)
carrier problem, 12272
cultivation, effect on pathogenicity,
..... 6746
cysts, passage through rat, effect on
infectivity for rat, 8712
diagnosis, efficiency, 17895
in dog, exptl. studies, 6757
emetine as affecting, 15210
exptl. infection in stomach, dog, cat,
..... 10495
heat therapy, 3240
incidence, Cuba, 6720, 6741
Florida, 14162
Indiana, 14176
in medical students, treatment as
affecting, 1570
Phila., therapy, 8682
Saskatchewan, 17905
isolation technique, 2641
pathogenicity, prolonged cultivation
as affecting, 6746
spread by food handlers, 15335
Endamoebidae (Protozoa), p.1868³
Endemism. (See also *Phytogeography*;
Zoogeography.)
in biotas of archipelagos of different age,
as data bearing on speciation, 5283
Endive (*Cichorium intybus*), *Verticillium*
dahliae attacking, 4961
Endocarditis. (See also *Heart*.)
acute, in wild animals, 16729
bacterial, bacteremia in antibody de-
velopment after disappearance, 6808
localization of vegetations, 9507
subacute, myocardial lesions, 16895
sulfanilamide causing agranulocyto-
sis and death in, 11605
vegetations, path., 16888
in brucellosis, 15266
fibrin factor in, 483
formation of new bloodvessels in, 672
lenta, transmission to mice, 9970
treatment, 2280
rheumatic, mortality, age group
statistics, 13640
tricuspid lesions in, 11176
Salmonella suispestifer causing fatal, 2643
streptococcal exp. in dog, 9953
tuberculous, of pulmonary valve, 6190
ulcerative vegetating aortic, *Klebsiella*
pneumoniae from, 6173
Endocolum (p.1862³) palmeriae, on
Palmeria, 8407
Endocrine glands. (See also *Hormones*;
under specific endocrine glands, e.
g., *Thyroid*; and under specific en-
docrine secretions, e.g., *Epineph-
rine*.)
ablation, effect on infection and intoxi-
cation in laboratory animals, 931
anemia syndrome, ♀, path., 9656
changes, in infants of diabetic mothers,
..... 4236
clinical therapy, book, 12988
cysts, relation to mammary tumors, 16857
disorders, clinical approach, 4292
protein-lipid ratio and, 11352
dysfunction, arteriosclerosis and, 5859
effect on metabolic processes, review,
..... 14631
on skeleton, review, 16600
embedding in rubber paraffin, method,
..... 7989
fatty inclusions in amphibians, 9691
hist., vit. B injections as affecting, 5897
as influenced by:
anthrax infection and vaccination, 4679
castration, 3801
diethylstilboestrol, 11232
lactoflavine, 9309
nephrectomy, rats, 7708
pineal tumor, 7827
intestinal absorption and, 12643
lipids, sterols and, 9201, 9202
new syndrome: sympathico-endocrine
syndrome, 2404
role in formation of breast tumors,
rabbits, 18203
schizophrenia and, 4296
synergy, between prolactin and pineal ex-
tract, mouse, 8818
vit. C in, avitaminoses and, 13275
avitaminosis B₁ as affecting, 14975
volumetric detn., 10378
wts., avitaminosis as affecting, 692
relation to behavior, rat, 8979
Endoderm. (See *Germ layers*.)
Endodermis. (See *Stele*; *Vascular system*
(plant).)
Endodothella (p.1861⁴), n. spp., 17498
Endogonaceae (Fungi), p.1861²
Endolimax (p.1868³), in Japanese beetle,
..... 1580
nana, incidence, Florida, 14162
incidence, Indiana, 14176
incidence, Saskatchewan, 17905
Endometriosis, clinical, 11109
factors affecting, 9433
lymphogenetic origin, 9430
Endometritis, in small animals, chemo-
therapy, 11601
Endometrium. (See under *Uterus*.)
Endomixis, effect on mating type,
Paramecium, 11105
in *P. aurelia*, bacteria as affecting,
..... 12280
Endomyces vernalis, fat synthesis from
carbohydrates by, 3334
Endomychura (p.1881³) *hypoleuca* scirpsii,
..... 5176
Endopalgiger, in Germany on mouse, 10581
Endosalpingiosis. (See *Endometriosis*.)
Endostiphonia (p.1860⁴), systematic
position, 15435
Endosperm. (See also *Embryo* (plant);
Embryo sac; *Embryogeny*; *Embry-
ology*, plant; *Fertilization*, plant,
double; *Seed*; *Xenia*.)
development in *Artemisia*, 4808
and chromosomes, in backcrosses of
Triticum hybrids, 7130
in *Malus* and *Pyrus*, 8910
formed without fertilization in
Ranunculus, 6449
Endospermum, stems, inhabited by ants,
..... 3488
Endothelium, unpigmented *Pl. falciparum*
in, 15952
ENEILLISSOMUS (Diplop.) (p.1873³), 12319
Energy, economy. (See *efficiency* under
Work.)
output. (See *Metabolism*.)
radiation. (See *Radiations*.)
requirements. (See under *Nutrition* and
under specific animals, feeds and
foods.)
yields, of diet, feeds, and foods. (See
under *Diet*; *Feeds*; *Foods*.)
ENERTHIDIUM (Fungi) (p.1862³), 17500
Engaeus (p.1874³), n. spp. from Tasmania,
..... 17967
Engelhardtia, wood anatomy, 17527
Engineering, biological, 8831
public-health, in rural-urban area, 15309
tree ring analyses and, 14338
Englerochloa (p.1865³), n. sp., 2865
Englerula (p.1861³), n. spp., 17498
Englerulaceae (Fungi), p.1861³
Englerulaster (p.1861³), n. spp., 17498
Enhydra (p.1883³) *lutris neretis*, life history
and habits, 5224
Enneacanthus, flake response, temp. and
critical illumination for, 7630
gloriosus, parasites of, 15943
Enotyla (p.1876³) *pusella*, biology and
ecology, 12408
Enoplata (Nematoda), p.1870⁴
Ensilage. (See also *Silage*.)
alfalfa, changes in silos of different
types, 1202
from hay crops, methods of making,
..... 6478
mulberry leaves as, 3000
Ensis (p.1872³) larva described, 3301
Entedon (p.1878³) pemphridid, parasite of
cotton stem-weevil, 14266
Enteric fevers. (See also *Paratyphoid*;
Typhoid.)
Bacterium paratyphosum C causing, in
Egypt, 17307
Enteric group of bacteria. (See *Para-
typhoid* and *Typhoid* groups of bac-
teria; *Eberthella*; *Salmonella*; etc.)
Enteridium (p.1861³) *rozeanum*, reactions of
swarm cells, 1085, 6361
Enteritis. (See also *Diarrhea*; *Dysentery*;
Gastritis; *Paratyphoid*; *Typhoid*;
etc.)
alkaline lysed vaccines for, 2561
cectis, chronic ulcerative, in rat, 6238
colitis, acute postoperative, shock and,
..... 14582
chronic, hepatic insufficiency in, 2092
chronic ulcerative, carcinoma and,
..... 16868
distr. of lesions, etiology and, 7517
etiology, 13613
idiopathic, treatment with liver ex-
tract, 12878
life histories and treatment, 14569
muscular spasm and, 7516
from fermentation, stomach acidity
and, 12889
gastro, acute infectious, etiology and
epidemiology, 2669
epidemic, paratyphoid bacillus-B caus-
ing, 10007
Salmonella braenderup in, man and cat,
..... 10083
pseudomembranous feline, chemo-
therapy, 11601
regional ileitis and ulcerative colitis,
relation to lymphogranuloma,
..... 607
of turkey poult, *Hexamita* in, 6735
Enteritis-paratyphoid group of bacteria,
classification and study, 8240
Enteritis-typhoid-paratyphoid group of
bacteria, diagnosis by Hohn-Herr-
mann method, 17341
differential medium for, 8275
differentiation of types and serological
phases, media for, 263
Enterobacteriaceae (Bacteria), p.1861³
Enterobius vermicularis, diagnosis, efficiency
of methods, 15971
epidemiology, Florida, 6742
epidemiology, Washington, D. C., 5039
incidence, in children, 10488
incidence, Cuba, 6720
incidence, Indiana, 14176
ova in household dust, 10505
Enterococci, comparisons of intradermal,
agglutinability and in vitro tests
for, in chronic infections, 11653
differentiation, by biochem. properties,
..... 9961
phage absorption by sensitized, 8214
from surgical conditions, serological
groups, 916
types of K. Meyer, serological compari-
sons, 6101
Enterokinase. (See under *Enzymes*.)
Enteromorpha (p.1860³) *compressa*, morph.
cyt. and life history, 13725
linza, gametes, 8331
Enterospermum (p.1867³), revision, 11855
Entocolax (p.1872³), anat. tax. and n. spp.,
..... 5116
Entoconchidae (Mollusca), p.1872²
Entoloma (p.1862³) *seriatum*, descriptive
notes, 2801
Entomobrya (p.1874³), tax., 3371, 14277
Entomobryidae (Collembola), p.1874³
Entomology. (See also *Insecta*.)
extension work, agencies for, 10385
in Jap. beetle control, 12303
use of radio in, 10385
value of visual aids, 12171, 12172
visual instruction in, 10386
forest, book, 15911
recent progress in, 1511
identification of spp. from immature
pupae, 3361
in Kansas, history, 14
laboratory, Leland Ossian Howard,
dedication, 3421
laboratory guide, 17976
medical, curricula for, 5055
metamorphotype, in museum collections,
..... 3361
methods for measuring results, 10384
modern economic problems in, 10382
publication of articles in, suggestions,
..... 1639
Puget Sound Entomological Society,
historical note, 17974
scope, 5129
veterinary, curricula for, 5055
Entomophthora, on apple leafhopper, 3169

Entomosporium maculatum, associated with apple leaf blight,15801
Entonyssus (p.1874³), new spp.,17981
 "Entoray" machine, in mosquito control,10444
Entosphenus (p.1878³), nomenclature,18041
 Environment. (See also *Climate*; and especially factors of environment, e.g., *Humidity*; *Light*; *Soil*; etc.)
 disease and,10008
 effect on:
 biology of *Chthamalus*,10796
 cyst formation, *Colpoda*,17927
 estrus cycle, rat,3960
 reproduction, *Strongyloides*,15959
 sympathetomized dog,7411
 tuberculosis incidence,13645
 of forest communities, Iowa,3500
 human control, book,12565
 in relation to agriculture,7174
 to plant communities,10782
 role in evolution, philosophy,10674
Erynnias (p.1880³) *aceras*,10623
 Enzyme(s). (See also *Antienzymes*; *Catalysts*; *Fermentation*; and enzyme secreting organs, e.g., *Pancreas*, *Stomach*.)
 actions, book,5462
 constitution and,4949
 nature and,7271
 sulphhydryl groups and,195
 adaptive, formation by bacteria, physiological youth rôle in,6306
 nature,7273
 anticatalase activity of sulfanilamide and related compounds,2662
 bacterial, effect on tubercle bacillus growth,8235
 in bacterial oxidation of ammonia,8348
 in bacteriophage lysis,8204
 in blood, in avitaminoses,11347
 nicotinic acid as affecting in pellagra,4265
 blood-group, *Bacillus perfringens* producing anti-enzyme to,6063
 in blood and urine, "protective protease reaction" and,5798
 cold-storage of food and,10041
 in colon juice,363
 crystalline, book,7272
 detn. with hemoglobin,185
 effect on:
 digestion of mollusc,8740
 larval develop. of nematode,10548
 phosphoric acid esters in muscle extract,12661
 in *Ficus latex*, as anthelmintic,15696
 in frozen vegetable, activity,2726
 of fruits and vegetables,2722
 in garlic,17667
 pH optima. (See under specific enzymes following.)
 hydrolysis of starch by, rôle of electrokinetic potential in,9087
 in intestinal juice, rate of secretion and,12873
 in liver, distr. between protoplasm and cell-nucleus,12872
 in liver extract,7260
 in milk, functions,13882
 Neufeld reaction and,18495
 papain-casein culture medium,2629
 in prep. of arginine and ornithine,5487
 protective, in tuberculosis, factors affecting,5448
 reactions, velocity, equations for,3565
 rôle in hydroid egg hatching,6779
 secreted by parasitic snails,14228
 system, of Jensen sarcoma cells,18200
 aconitase, in animal tissues,16312
 acylase, study,5438, 5439
 alcoholases and phenolases, kinetics,14028
 allantoicase, in legumes, physiologic rôle,3587
 allantoinase, use in detn. of allantoin,212
 amylase, action and kinetics,10338
 temp. as affecting, cold- and warm-blood animals,5601
 in barley vars.,1199, 1368
 heavy water as affecting,8592
 in leaves, factors affecting,12106
 pancreatic, temp. coefficients of saccharifying action,9097
 of wheat, effect on soluble starch,1897
 fumigation as affecting,3190

Enzyme (continued)
 arginase, activation,16313
 activity, as influenced by carotene,9094
 by fasting and diet,12677
 by liver damage and fasting, rabbit,12668
 in gastric carcinoma,9588
 in liver, diet as affecting,12896
 autolytic and antiautolytic, of pneumococci,13494, 13495
 carbohydrases, in lupines,15777
 carbonic anhydrase, in chloroplasts,14010
 in invertebrates,7265
 carboxylase, in germinating oats,10335
 histidine, studies,5466
 kinetics,10324
 catalase, action, of casein,14450
 during development, chick,11442
 of fibrin,14449
 as influenced by:
 heavy metals and pH, *Aspergillus*,15779
 N, P, and K,14030
 organic nitro compounds,14824
 short waves,1898
 sulfanilamide,538
 related to photosynthesis,15782
 in tobacco, correlation with bacterial numbers,1030
 in blood, supersonic waves as affecting,12674
 thawed and distilled water as affecting,9090
 in chloroplasts,14010, 17730
 crystalline, comp.,3563
 immunochemistry,12663, 12679
 as index to seed viability,13998
 to wheat viability,15539
 in mastitis milk test,6226
 prep. from horse liver,184
 cathepsin, specificity, from liver and tumor,3560
 survival in autolysis,10853
 cholinesterase, activity, detn.,217
 as influenced by:
 prostigmin and guanidine,14458
 strophanthin,16787
 temp.,3556
 thiamine,7264
 in blood, detn. and significance,12717
 in diseases,13178
 parturition as affecting,9424
 in blood and spinal fluid,9141
 inhibitors,14681
 in liver,7761
 in muscle, tetanus toxin as affecting,13003
 in muscle and blood in diseases,7553
 in nervous tissues,16640
 in pig,3555
 specificity,13178
 in tissues in myasthenia gravis,13178
 in voluntary muscle,7556
 cocarboxylase, conversion to thiamin,2064
 synthesis,3566
 bacterial,10057
 coenzymes. (See also *Phosphoric acid esters*.)
 of carboxylase, in germinating oats,10335
 di- and tri-phosphopyridine nucleotide, in blood, nicotinic acid as affecting,7353
 I, in oxidation of l(-) glutamate,10852
 R, *Rhizobium* requirements,2740
 systems, growth substances and,4714
 T, prep. and detn.,16355
 cozymase, in blacktongue treatment,16512
 in normal and avitaminotic rats,13266
 I and II, in disease, yeast and riboflavin as affecting,5841
 deaminase, of adenosine and adenylic acid, properties,10851
 guanine- and riboguanosine, actions and tissue distr.,12682
 specificity in *Aspergillus*,10334
 dehydrogenase, activity, iodoacetic acid as affecting,7259
 in bacterial nitrate reduction,15425
 butyric acid, absence in carcinoma, effects,7826
 formic, inactivation by O₂ and protection in bacteria,14452
 l(+) glutamate, coenzyme-linked reactions involving,10852

Enzyme (continued)
 dehydrogenase (continued)
 inhibition by 3:4-benzpyrene,3561
 by snake venom,10850
 by u.-v. rays,3562
 isocitric,14446
 action on citric acid,12671
 succinic, cytochrome system, Al, Cr and rare earths as affecting,7267
 lactic and citric, discussion,10854
 properties,12672
 in wheat, winter vs. spring vars.,13806
 dehydrogenizing, of *Acetobacter peroxidans*,13678
 diaphorase,10855
 in heart muscle,14780
 in blood and lenses and,16311
 prep. and action,10855
 diastase, effect on seed germination, *Pisum*,12105
 in fat tissue, denervation as affecting,14535
 review,7245
 taka, effect on glycerophosphates,11762
 urinary, as index of unilateral renal function,3940
 in pancreatic necrosis,9408
 use in diagnosis of pancreatic disease,10915
 emulsin, phenol-carbonic acid hydrolysis and synthesis by,12665
 enterokinase, purification and conc.,7270
 trypsin formation from trypsinogen by,7269
 esterase, action on α, α -diolein and α, β -diolein,7262
 oxidation and reduction as affecting,12710
 vit. C in organs and,3735
 fat oxidizing, in cold-stored fish,10032
 β -glucuronidase, prep. and purification,7297
 glycolytic and glycogenolytic, in brain and blood of psychotic and normal humans,3559
 histaminase, activity, thiamin as affecting, tissue occurrence and,12683
 in allergics vs. normals,795
 conc. in placenta, man,7583
 hydrogenase, in bacterial hydrogenation,15426
 in metabolism of purple bacteria,15421
 hydrolytic, ethylene as affecting,10327
 lactase, of *Escherichia coli-mutabile*,10080, 13680
 lactic acid-racemizing of *Clostridium butylicum*, props.,6260
 lactic dehydrogenase, salts as affecting,15396
 lipase, action, on α, α -diolein and α, β -diolein,7262
 as influenced by:
 bile acids,12892
 carotene, ascorbic acid and O₂,9095
 hyodesoxychoic acids,13164
 short waves,1898
 in blood in pancreatitis,1958
 pancreatic, activation of washed enzyme by blood serum, etc.,1895
 castor bean, specificity and action on blood neutral fat,14456
 in pulmonary circulation, emulsions of lung and other organs as affecting,16429
 tributyrin-hydrolyzing, staphylococcus pathogenicity and,6181
 lipoxidase, of pork,10049
 lysozyme, effect on spirrochaetes,865
 gonorrhea therapy by,930
 lysates of anaerobic bacteria by,378
 properties,10849
 of saliva, effect on oral microorganisms,907
 milk curdling, studies,16314
 mucin hydrolysing,12643
 mutase, in liver,12816
 nucleotidase, from almonds, action on nucleic acids,12103
 nucleosidase and in digestive juices and tissue extracts,12670
 oxidase, ascorbic acid, non-specificity,7277
 Cu-protein, substrate specificity and characteristics,10856
 from *Cynara*, hypoglycemic action,11246

Enzyme (continued)

- oxidase (continued)
 cytochrome, not identical with Warburg's enzyme,15778
 in tissues, Cu and Fe deficiencies as affecting,14460
 diamine, study,1899
 indophenol, rôle in secretion of chorioid plexus,1990
 from *Lactarius piperatus*,6613
 system, pituitary extracts as affecting,9299
 in tubercle bacillus,10857
 vit. C in fruit juices,5576
 xanthine, activity, glycine and CN, as affecting,5463
 purification and properties,7261
 pancreatase, effect on seed germination, *Pisum*,12105
 pancreatic, effect on oxy- and carboxy-hemoglobin,7274
 hydroxy acids and salts as affecting,194
 protein degrading and proteolytic enzymes in,9100
 papain, cosubstrates in hydrolytic action,14447
 prep. and value,198
 u.-v. absorption spectrum,14463
 pectase, for clarifying fruit juices, isolation from leaves,4865
 of tomato, heat inactivation,189
10048
 pepsin, in antitoxin purification, 8118
 chem., book,7272
 crystalline, solubility,12676
 effect on seed germination, *Pisum*,12105
 electrophoresis,197
 formation from pepsinogen,187
 in gastric juice, birds,9254
 protein degradation and hydrolysis by,9099
 proteolysis of tetanus antisera by, effect on antitoxic power,17179
 specificity,5455
 tyrosine, formation by action on casein,5452
 peptidases, of bacteria,2749
 formation by *Clostridium*,191
 in hepatoma and normal liver, rat,4206
 peroxidase, ascorbic and dihydroxy-maleic acids oxidized by, 5464
 in Hb, activation by factor in plasma,14511
 in milk, effect on thermal death rate of bacteria,6275
 of tea, properties,17406
 phosphatase, "acid" and "alkaline", separation and activation, liver and spleen,7276
 "acid," functional activity of prostate and preputial glands and,1892
 activity, cystein and Fe as affecting,9098
 detn.,3567
 in higher plants,4950
 rachitic rats,3564
 alkaline, nature,16309
 in blood, fowl,1977
 in hypothyroid children,14870
 in blood and bone, perotic chicks,3567
 in breakdown of glycogen in liver extracts,186
 as influenced by:
 age,16439
 jaundiced serum,12643
 liver,10858
 vit. D,2082
 of laying hen,2510
 in leucemia,11274
 during pregnancy and lactation,3959, 14689
 seasonal variations in children,14872
 in urinary lithiasis,5504
 in detn. of jaundice types,8261
 effect on glycerophosphates,11762
 in liver disease,12900
 parathormone as affecting,9360
 in saliva, origin and significance,5456
 test, as pasteurization indicator,1088, 8079, 11777
11783, 18364, 18681
13683, 18684, 17417
 testosterone as affecting in prostate, monkey,12957
 vit. C as affecting,11015

Enzyme (continued)

- phosphorylating, activity in muscle extract,5451
 phosphosaccharomutase, studies, 12666
 phytase, action in high plants,4950
 polypeptidase, carboxy, study,5438
 in eye,5441
 specificity,5440, 5443
 protease, activity, drought resistance and,15775
 of cobra venom,188
 oxidizing agents as affecting,3094
 protective reaction, inheritance and,5444
 protein synthesis by, in plants, 10381
 protein disaggregation by,4497
 proteinases, bacterial,15424
 of *Clostridium*, adaptation,192
 secretion,190
 serum inhibition,15162
 of digestive tract, *Homarus*,347
 of sprouted wheat,193
 protein-proteinase digests, synthesis,196
 proteolytic, activation in wheat during sprouting,3075
 antitoxin purification by,4497
 of *Ascaris*,15994
 of bacteria,2749
 of *Clostridium paraboletinum*,13698
 degrading, temp. optimum,9100
 effect on:
 ant. pituitary extract,12643
 antitoxins and proteins in immune sera,17188
 development of crown gall,8605
 helminth extracts as affecting, 17891
 in oats, effect on furs during fermentation,14461
 resistance of muscles to during development of sarcoma,9096
 review,14440
 rôle in blood coagulation,12643
 specificity,5453
 in spleen extracts,14451
 of vibrios,8354
 protyrosinase, changes in potency of activator during development of *Melanoplus*,17062
 formation in vivo, autocatalytic nature, grasshopper eggs, 1889
 ptyalin, effect on pituitary extracts,3861, 9342
 prunase, action on HCN, sugars as affecting,12104
 reductase, in bacterial nitrate reduction,15425
 in lemons, storage temp. as affecting,14035
 rennin. (See *Rennet*.)
 respiratory. (See also various enzymes, e.g., *catalase*, *dehydrogenase*; *Pigments*, *respiratory*, and various pigments, e.g., *cytochrome*, *hemins*; *Flavins*; *Glutathione*; *Vitamins*; etc.)
 yellow, protein and prosthetic group,3557, 3565
 ribonucleodepolymerase,1896
 steapsin, in blue cheese manufacture,17411
 thrombin. (See *Blood coagulation*.)
 thrombokinas, study,5454
 trypsin, chem., book,7272
 chymo-, beta and gamma, isolation,1894
 coagulant action,14503
 Ca, cephalin and,10902
 on hemophilic plasma,14504
 cystine liberation by casein digestion,12667
 degradation and hydrolysis of proteins by,9099
 effect on:
 gonadotropic extracts, 5449, 12946
 pituitary extracts,3861
 smooth muscle,5783
 tetanus toxin broth,11542
 formation from trypsinogen by enterokinase,7269
 formation of inert protein and,7268
 histamine liberated in lung by, 5783
 inhibition mechanisms in blood plasma,5465
 lactoglobulin digestion by chymotrypsin and,14457
 renal insufficiency after injection into renal arteries,2143
 specificity,5445, 14451
 use in prep. of follicle-stimulating extracts,9125
 vaccinia virus separation from tissue culture by digestion by, 8201

Enzyme (continued)

- tyrosinase, activity, detn., use of added protein in,3554
 as influenced by:
 dialysis,14459
 factors,12643, 14029, 17732
 solutes,16308
 x-ray,12704
 chemistry,4948
 inhibition by Na benzenone-indo-phenol,1891
 urease, action on urea compounds, 5658
 bacterial,18718
 in blowfly larvae, prep., 10441, 12680
 temp. activation,12675
 toxicity on parenteral inf., cat, 16796
 uricase, in liver, dog,2102
 xylanase, activity, factors affecting,14031, 14032
 zymase, inhibition by monoiodoacetic acid concs.,11764
Eophila (p.18714), n. sp.,6811
Eorupertia (p.18682) *neocomiensis*, (K),17925
 Eosin, as stain for malarial oocysts in mosquito,12268
 Eosinophiles. (See *Eosinophila*; *Leucocytes*.)
 Eosinophila. (See also *Leucocytes*.)
 hyper-, unusual form of filariasis and,14180
 lung infiltrations (transitory) with,4455
 in onchocerciasis,15960
 in schistosomiasis, after Sb treatment,14178
 in trichinosis, diagnosis,3699
 rat,1568
Epagurus, shells, inhabited by hermit crabs, ecology of *Hydractinia* mats on,15932
Eperythrozoon, review,6158
enyoni, calf infected by,2708
Ephedra (p.18647). (See also *Ephedrin*.)
 in dung of ground sloth,7048
 ephedrin content, spp. compared,12022
 spp. from India, ephedrine content,12055
 Ephedrine. (See also *Ephetonin*; *Ephedra*.)
 action, duration, dose and,11211
 derivatives, spasmolytic action, 4104
 diethylaminoethyl- effect on circulatory system, rabbit,11237
 effect on:
 bactericidal power of blood serum,4561
 blood Ca and coagulation,13178
 bronchi,2250
 central heat production,11221
 central nervous system,532
 coronary vessels,539
 heart, frog,16774
 heart-lung prep.,2292
 histamine output of heart,539
 iris and intestine,13150
 iris muscle,4045, 13155
 male genitalia,16623
 myotonia,2312, 11231
 sympathetic nervous system, 13178
 thiobarbiturate action on heart, 525
 in *Ephedra*, spp. compared,12022
 history of use, and rainfall as affecting,12055
 and related compounds, effect on smooth muscle,7739
 series, elimination, man,293
Ephedrus (p.18782) *nitidus*, parasite of aphid,10451
Ephemerea, larvae, metabolism,16469
danica, gill movements,16046
Ephemeral fever, bovine, in Australia,6250
Ephemera (p.18753), gill movements,16023
 seasonal allergies incited by,6088
Ephestia (p.18777), blood movement and fat body development in wings,4401
 diffusible eye color substances of, compared with those of *Habrobracon* and *Drosophila*,1760
 eye pigmentation, review,12540
elutella, in warehouses, control, 3192
kuehniella, effects of high temperature on wing pattern,5348
 inheritance of wing pattern,98
 light reactions,3989
 reaction of hypodermis and druses to pupation hormones,5145
 segmentation, regulatory capacity during,9791
 sex-linked mutation,16200

Ephetonin. (See also *Ephedrine*.)

effect on:
 central heat production.....11221
 circulation.....4142
 myotonic muscle.....11231
Ephialtes (p.1878*), sp. parasite of pink
 bollworm.....12231
Ephydrata, dist. in relation to *Ca*, Mg,
fluviatilis, water mite associated with.....3498
3313
Ephydriidae (Diptera), p.1877*
Epiactis prolifera, pigments of, carotenoid,
3274
Epibdella (p.1870*) *pacific* (*Benedictia* p.),
10544
Epiblast. (See *Embryo (plant)*; *Embry-*
ogeny; *Seed*; *Seedling*.)
Epicaridea (Crustacea), p.1873*
Epiceratodus forsteri, pituitary, anatomy
 and development.....5899
EPICERIN (Dipt.) (p.1877*),14253
Epicotyl. (See *Seed*; *Seedling*.)
Epidemic(s). (See also *Epidemiology*; *In-*
fections; and particularly under
 specific pathogenic organisms and
 diseases.)
 in controlled guinea-pig colony.....17391
 virus-pneumonia in infants after, 11614
Epidemic encephalitis. (See *Encephalitis*,
epidemic.)
Epidemiology, airplane relations.....15332
 of amebiasis.....15385, 15945
 of B-virus infection.....9943
 bacterial incidence on ice cream scoops,
10014
 book.....4655, 8303
 of brucellosis.....15327
 in Orient.....988
 of cardio-vascular diseases.....995
 of cattle diseases.....4674
 of cholera.....11698
 of dental caries.....15297
 diarrhea etiology and.....2645
 of diarrheal diseases.....8294
 of diphtheria.....989, 4622, 6188
6207, 6219, 8144
15291, 15350, 15854
 disease control procedures.....15301
 of dysentery.....13709, 15294, 17290
 of encephalitis.....15308, 15351
 enviroanal relations.....10008
 of epidemic cerebrospinal meningitis,
8163
 of equine encephalomyelitis.....15256
 factors in.....11711
 of gastroenteritis (acute infectious)
2669
 of gonorrhea.....15342
 of helminthiasis, Florida.....6742
 of herpes.....9943
 of hookworm, Florida.....5093
 of influenza.....15310
 of leishmaniasis, Sudan.....6740
 of leprosy.....558, 4655, 4657, 4661
10019, 10021, 15320, 17363
17365, 17367, 17368, 17373
 of *Leucocytozoon* infection in turkeys,
12273
 of lymphocytic choriomeningitis in stock
 mice.....11624
 of malaria.....6759, 10487, 15858, 15970
 of measles.....4666, 8312, 15808, 17360
 of *Monaxia* infestation in sheep.....1569
 mortality from metabolic diseases, 986
 among negroes, in Arkansas delta area,
11716
 organization in Brazil.....13635
 of oxyuriasis, Washington, D. C., 5089
 of paratyphoid.....2673, 6196, 10007
11696, 11719, 13709, 17371
 of paratyphoid-enteritis group of bac-
 teria.....8240
 of plague.....8915, 8316
10027, 13637, 15311
 of plumbago-borne diseases.....11693
 of pneumococcus type-1 infection, 833
 of pneumonias.....11694, 11706
15316, 15317, 17366
 lobar.....13644
 of poliomyelitis, 949, 6211, 8266, 17377
 of psittacosis.....8310
 quarantine and fumigation in relation
 to shipping.....10013
 of rabies.....11674, 11723, 15243
 of relapsing fever.....15314
 of renal diseases.....995
 of respiratory tract infections, in
 infants.....15318
 of Rocky Mountain spotted fever,
11683, 11689
 of rodent plague.....6214
 role of inborn resistance factors in,
13659

of scale insect, Hungary.....17861
 of scarlatina.....989, 8233
8234, 8243, 15315
 of streptococic infections.....8233
8234, 9872
 of syphilis.....15340
 of tetanus.....8327
 of tick-borne diseases, India.....11707
 of trichinosis.....14195, 16904, 17241
 of tuberculousis.....978, 982, 985, 1002
2683, 4662, 6221
8241, 8281, 11682
11697, 11710, 11715, 13645
 of tuberculous infection, skin test as
 index.....8127
 of typhoid, 10022, 13709, 15349, 17371
 of typhus.....10023
 of undulant fever.....11516, 15339
 of venereal diseases, advances in,
11700, 13633
 of virus diseases in Brazil.....17288
 of Weil's disease.....6200, 8139
8302, 15319
 well-water relations.....15313
 of yellow fever.....6218, 15332
Epidermis (animal). (See also *Skin*.)
 human, mitotic rhythm.....57
Epidermis (plant). (See also *Cuticle*,
plant; *Leaf*.)
 growth and tissue tension in, *Helianthus*
 hypocotyl.....1370
 of leaves, lipoids secreted by.....4957
 staining with Bismarck brown,
Tradescantia.....16116
Epidermophyton (p.1863*), guinea pig sus-
 ceptibility.....11647
 spp. from surfers foot.....13623
inguinale, comparative pathological and
 immunological relations of infec-
 tions by this and other dermatoph-
 ytes.....6203
 growth, factors influencing.....972
Epidiopsis (p.1875*), n. sp.....10605
Epididymis. (See also *Testis*.)
 estrogen as affecting, after castration,
7549
 primary tumors.....4193
Epididymitis, tubercle bacillus types in,
13603
EPILECHIA (Lepidopt.) (p.1877*), 16040
Epilepsy. (See also *Convulsions*.)
 Amantea's, in monkeys.....14732
 changes, vs. thujone and camphor
 convulsions.....16946
 electroencephalogram.....11356
 in healthy relatives.....14729
 focal, cardiazol used in localization,
5867
 genuine, and tubercous sclerosis, 16953
 seizures, blood and brain pH in.....4013
 sodium Cl as affecting.....14840
Epilobium (p.1866*), tax.....1158, 8442
 genetics of development, in inter-
 specific crosses.....16176
 reciprocal cross differences, discus-
 sion.....16177
 reciprocal differences in species and
 race hybrids.....5310
Epimys (p.1883*) *novegicus*, extermination,
 by "rat-virus" preparations, statis-
 tics.....8282
 parotid gland, serous cells, cytology,
2447
Epinannolene (p.1873*), n. sp.....5124
Epinannolenidae (Myriopoda), p.1873*
Epimasty. (See under *Movements*.)
Epinephrine. (See also *Adrenal glands*.)
 absorption from digestive tract during
 alarm reaction.....860
 action, central.....9393
 defatiguing.....4134
 duration, dose and.....11211
 in hypoglycemic shock.....7430
 as influenced by:
 anoxemia, rabbits.....12314
 ascorbic acid.....5573
 barbital.....11234
 diet, dog.....14521
 donaxine, dog.....13175
 drug 933 F.....13169
 potassium.....13178
 mydriatic, after sympathectomy.....5771
 adm. per os, effects.....547
 in adrenergic neurones.....7552
 atypical reactions to slow.....15132
 antagonism to metrazol.....12643
 benzol, cardiac action and treatment,
5785
 in blood and adrenals, in scurvy, thy-
 roidectomy and.....16918
 chem., intestine-inhibiting function and,
11041
 derivatives, spasmolytic action.....4104

Epinephrine (continued)

effect on:
 activity of sloth.....12935
 anesthesia.....4169
 antigen and antibody action.....6107
 arterial tone.....13118
 auricle.....7726
 autonomic centers.....5759
 autonomic function.....7654
 avascular pieces of omentum, 4355
 bile secretion, cat.....11222
 biliary and pancreatic papillae,
 rabbit.....13137
 bleeding time, rabbits.....11329
 blood bromine.....12986
 blood lactic acid.....16413
 in glycogenolysis.....16487
 blood plasma vol.....9148
 blood K.....12762, 14497
 blood pressure.....4107
 acetylcholine as affecting, cat,
14849
 in denervated dog.....13160
 repeated adm., antihormone and,
7781
 sympathol and.....7775
 blood sugar, Cu as affecting.....11255
 mechanism.....11225
 of pellagrins.....14946
 pituitary extracts as affecting,
11068
 blood vessels of lung, frog.....9574
 optical isomers of amino acids as
 affecting.....7771
 blood vit. C content.....3642
 bronchi.....2250
 carotid sinus reflexes.....2296
 central heat production.....11221
 circulation.....4142, 16734
 in extremities.....5722
 circulatory system, barbital and,
16793
 color of flatfish.....14662
 corneal sensitivity.....2210
 creatin-creatinin output.....13021
 digitalis action.....5737
 diphtheria toxin action on heart,
16809
 fibrillation.....16730
 gastric secretion.....9254
 heart.....14655
 autonomic drugs and.....7736
 after denervations.....7735
 frog.....491, 16774
 in hyperthyroidism, rabbit.....7737
 lobster.....13004
 thyrotoxic.....405
 heart glycogen.....7706
 in hyperthyroidism.....4087
 heart rate, man.....524
 heart use of pyruvic acid.....7707
 insulin action on body temp.....11241
 intestine.....13150
 intrapulmonary pressure and venous
 outflow of perfused lung,
11047
 iris muscle.....4045, 13150, 13155
 kidney function.....13161
 lacrimal gland.....16488
 leucocyte formation.....11213
 liver glycogen during perfusion,
14573
 liver sugar and K output, turtle, 361
 liver vol. and outflow, turtle.....3766
 lymphocytes.....11322
 male genitalia.....16622, 16623
 melanophores in fish scales.....14663
 metabolism.....5533
 of tissues, cat.....9540
 muscle, drugs affecting.....7733
 myotonia.....2312, 11231
 nictating membrane.....5730
 denervated.....4028
 O₂ consumption, and CO₂ output of
 intact leg, cat.....12643
 of heart and coronary flow.....5717
 perfused lung.....3775, 16800
 plasma and erythrocyte glycogen,
7343
 plasma loss in guanidine poisoning,
7786
 procaine action on respiration, rabbit,
16790
 progesterone action on uterus, 13178
 pulmonary dead space.....3774
 pulmonary differential pressures,
4071
 reflex excitability of autonomic ner-
 vous system.....14715
 renal and vascular systems, glomeru-
 lar and aglomerular fish,
11098
 respiration, drugs affecting.....14813
14814

Epinephrine (continued)

- effect on (continued).....14534
R.Q. and blood comp.....14534
retina after adrenalectomy.....12989
retinal vessels.....14773
skin temp. responses.....12643
smooth muscle, structure and.....12643
sympathetic ganglia.....7555
thiobarbiturate action on heart, 525
tissues, vs. effects of sympathetic
stim.....11080
vagina, rabbit.....9563
vegetative centers, rabbit.....14812
visco-elastic properties of lungs, 7529
electrophoresis into skin in treatment
of asthma.....14783
gelatin mixture, absorption in allergy,
chemistry.....14854
inactivation by acetaldehyde, rôle of
peroxides in.....7811
insulin theory of hunger and satiety,
.....12901
intracranially applied.....2336
in leeches and mealworms.....9384
liberation by stimulating isolated nerves,
.....14658
in malaria therapy.....8183
intraven., possibility of repeating,
.....8704
r-N-methyl, pharm.....5755
in nervous control of skins blood flow,
.....16732
in oil, effects in chronic asthma.....16799
poisoning, adrenalectomy and histamine
as affecting.....9577
and related compounds, effect on
veins, structure vs. action, 14805
secretion. (See under Adrenal gland.)
sensitivity, in renal hypertension, 503
sensitization and habituation, factors
affecting.....12945
state in blood.....9387
thyroxin synergistic, amphibia and
fishes.....2301
toxicity, rabbit.....547
Epinephrine, effect on iris sphincter.....13155
on smooth muscle.....11216
Epitaphia (p.1875) superstes, sound pro-
duction.....16045
Epiphysis. (See Pineal gland.)
Epiphytes, on *Agathis australis*.....9017
fungous, fungi on, cultural studies,
.....13733
lichens, ecology.....3504
moss flora of trees.....124
Epitaphia (p.1879), n. spp.....8803
fasciolatus, embryonic tissues, differen-
tiation in amphibian blastocoele.....8049
Epiploon. (See Omentum.)
Epipogon (p.1865), spelling of.....11872
Epistylis (p.1868) plicatilis, food vacuoles,
movement.....3264
Epithelial bodies. (See Parathyroid glands.)
Epithelioma contagiosum, immunization,
by tissue-cultured vaccine, 11570
turkey-pox epidemic by tissue-cultured
virus.....957
branchial, permeability to cetylquino-
lineum.....9082
Epithelium, bromide in.....3942
of gall bladder, cytology, man.....1727
incinerated, distr. of inorganic ash,
.....4367
regeneration, Fe as affecting.....649
of trachomatous conjunctiva, tissue
culture.....8213
Epitria (p.1876), on potato, life history,
control.....5032
cucumers, control of.....8641
injury to potato.....17873
parvula, damage to tobacco.....5038
hibernation, and number of genera-
tions.....17870
Epizeuxis (p.1877), syn.....12394
Epizootics of botulism in waterfowl.....17888
Epizootic encephalomyelitis. (See Born's
disease.)
Epitesicus (p.1882) f. fuscus, notes of,
.....5244
Epymeria (p.1860), n. spp.....13726
Equidae (Mammalia), p.1883
carotid sinus, morphology.....11377
craniometry, of Pliocene spp.....7047
pony, rhinosporidiosis in, India.....3251
trichostrongylosis in.....15950
Equilibrium. (See Ear, labyrinth; Nystag-
mus; Posture; Otoliths; Vestibular
apparatus.)
Equisetaceae (Pteridophyta), p.1863
Equisetales (Pteridophyta), p.1863
Equisetum (p.1863), n. combs.....8442
arvense, sporophyte.....17562
debile, distr. in India, and n. var., 4755
telmateia, in Michigan.....1107
Equus (p.1883). (See also Horse.)
complicatus (Pl), from Tennessee cave,
.....12443
kiang, in Thibet.....5223
Eragrostis (p.1864), new spp.....13732
.....15489
Erastrinae (Lepidoptera), p.1877
Erathyrus, in trypanosomiasis transmission,
chemistry.....14165
Erax aestuans, egg laying and early stages,
.....12373
Erdis, produced by *Aspergillus*, mol. con-
stitution and synthesis of trimethyl
esters.....11761
Erechtites hieracifolia, alkaloids from,
chemistry.....12038
EREMBERGA (Lep.) (p.1877), *Cactobrosis*
leucopsis type.....8792
Eremocarpus (p.1866), preoccupied.....2888
Eremocoris (p.1875) erraticus, idiochromo-
somes.....14853
Eremothecium ashbyi, flavine from.....3091
Erencyrtus (p.1878) dewitzii, parasite of
Laccifer.....14102
Erethizon (p.1883). (See also Porcupine.)
dorsatum, range.....5240
(Pl), from Tennessee cave.....12443
Erethizontidae (Mammalia), p.1883
Ergamine. (See Histamine.)
Ergasilus sieboldi, on fish gills.....14234
Ergates (p.1876) faber, in Normandy,
.....3324
Ergograph, descr.....1949
Ergosterol. (See also Vitamin D.)
action of light on substances related to,
antigenicity, native vs. ultraviolet-
irradiated.....9886
irradiated, relation to carcinoma.....4181
in trichinosis therapy.....8713
yeast content.....4694
Ergot, effect on:
color of flatfish.....14662
creatin-creatinin output.....13021
melanophores in fish scales.....14663
principles and preparations. (See also
Ergotamine; *Ergotoxine*.)
absorption.....13178
diuretic and antidiuretic action,
.....2339
effect on diuresis, dog.....7814
ergobasine, effect on carotid sinus
reflexes.....2296
ergometrine, effect on:
carotid sinus reflexes.....2296
uterus, man.....2321
blood pressure and, cat, 16768
ergonovine, effect on autonomic ner-
vous system.....5759
on vegetative centers.....14812
ergotinine, effect on urine output,
.....5794
sensibamine, diuretic action.....2339
undesirable effects.....16762
Ergotamine, central action.....9393
effect on:
acetylcholine action on circulation,
.....13178
amphibian lymphatic hearts.....16735
autonomic centers.....5775
autonomic nervous system.....5759
cardiac action of epinephrine, rabbit,
.....7736
diphtheria toxin action on heart,
.....16809
epinephrine effect on skin blood-flow,
.....16732
lactate effect on blood pressure,
.....11192
lung blood vessels, frog.....9574
male genitalia.....16622
plasma loss in guanidine poisoning,
.....7786
response of bladder to ant. hypothala-
mus stim.....5663
splanchnic control of pancreas, 16685
toxic apnea, rabbit.....14814
toxicity of nitro compounds.....14824
T wave of electrocardiogram.....11207
vagina, rabbit.....9563
vasomotor reversal, anesthetics and,
.....7769
vegetative centers.....14812
intracranial application.....5775
poisoning, blood vol. and tail gangrene
in, rats.....7345
in surgery of thyroid.....13178
undesirable effects.....16762
Ergotism, symptoms and antidotes, 16762
Ergotoxine, effect on:
perfused lung.....16800
potassium action on blood pressure,
.....9077
retractor penis, dog.....7783
urine output.....5794
vasomotor system, anesthetics and,
.....7769
Ericaceae (Dicotyledones), p.1866
Ericales (Dicotyledones), p.1866
Eridontomerus (p.1878), morph., phyl.,
.....1632
Erigeron (p.1867), n. spp., 13751, 15500
culture and ornamental spp.,
California.....11985
parthenogenesis and meiosis.....3445
Erinaceus. (See Hedgehog.)
Eriocaulaceae (Monocotyledones), p.1864
Eriocaulon (p.1864), n. and Central
American spp.....4769
Eriochair (p.1874) sinensis, Chinese and
German forms of.....12325
larva.....12332
Eriococcus (p.1875) acutus, and n. spp.,
.....8784
Eriodendron anfractuosum. (See Ceiba
pentandra; Kapok.)
Eriogonum (p.1865), tax.....6411, 8442
hybrid, note.....2869
abertianum, notes.....2860
parvifolium, *Phloxia* on roots.....4792
Eriogyna (p.1876) pyretorum, silk, chem.
constituents of.....3221
Eriophyes (p.1874) pyri, forms and con-
trol of.....10393
Eriophyidae (Arachnida), p.1874
Erioptera (p.1877), n. spp.....14251
Eriosoma (Homop.) (p.1875) crataegi, life
history.....17855
lanigerum, descr., life history, hosts,
parasites.....17855
resistance of apple vars. to.....1492
Eristalis (p.1877), n. sp.....6895
Eristhacus (p.1882), bird banding.....14286
Eriopnea (p.1867), n. spp.....15483
Erodium glaucophyllum, root system, 10780
Erosion. (See under Soil.)
Erpobdella punctata, chromaffin nerve cell,
nature.....5970
Error(s). (See also Agriculture, experi-
mentation; Biometry.)
rapid evaluation in bioassay.....7794
Erucaria boveana, root system.....10730
Erwinia (p.1861), systematic position,
.....6299
amylovora, on apple, factors influencing
susceptibility.....1538
viability in bacterial exudate, 6840
carotovora. (See also *Bacillus carotovorus*.)
causing potato rot, cultural and
pathogenic strains.....17763
Erycininae (Lepidoptera), p.1876
Erynnis (p.1876) ello, metamorphosis,
.....5141
Eryops, extensor muscles, reconstruction,
.....1695
Erysipelas, mortality and therapy sta-
tistics.....6201
swine. (See also *Erysipelotheirus rhusio-
pathiae*.)
dissociation of bacterium.....13691
ducks infected by.....4676
serodiagnosis by microscopic agglu-
tination test.....6123
in turkeys.....11751
Erysipelotheirus (p.1861), dissociation, 4704
morphological, cultural, serological
and pathogenic comparison
to *Listeria*.....4704
rhusiopathiae. (See also *Erysipelas*,
swine.)
dissociation.....13691
ducks infected by.....4676
histopath. of paratyphoid of pigs
associated with.....2705
serodiagnosis of infection by micro-
scopic agglutination test, 6123
turkeys infected by.....11751
Erysiphaceae (Fungi), p.1861. (See
Mildews.)
Erysiphe cichoracearum, on *Carica papaya*,
.....1482
control by water spray.....6688
on muskmelon, inheritance of resis-
tance.....1482
graminis, on barley, resistant var., 6674
control by water spray.....6688
on wheat, antagonism to bunt.....4994
effect on foliar respiration.....1451
effect on host respiration.....6672
effect on respiration and chloro-
phyll.....3136
pathogenicity as affected by light,
.....17822
polygona, attempted culture.....17502
on bean and cowpea.....17813
on leguminous crops, resistance to,
.....17814

- Erythra* (p.1864⁴) *edulis*, pneumathode in, 13781
- Erythema*. (See also *Dermatitis*; *Dermatosis*; *Irradiation*; *Ultraviolet*.)
 edema, pain sensation of skin and, 5698
 multiforme, heterogenetic antibodies in, 846
 test of ultraviolet intensity, 10762
- Erythelmus* (p.1878⁸) *psallidis*, egg parasite of cotton flea hopper, 12330
- Erythremia. (See *Polygythemia*.)
- Erythremic myelosis, acute, hist., 16399
- Erythrina alkaloids, curare-like action, 12643
- Erythrina* (p.1865⁵), alkaloids of, 4904
 alkaloids from, properties, 12020
 spp., in Asia and Polynesia, 11890
 eggling, 1123
- Erythroblast. (See under *Erythrocyte*.)
- Erythroblastosis, expl., effect on *Plasmodium* infection, canary, 10492
- Erythrocytosis*, review, 6158
- Erythrocyte(s). (See under *Erythrocytes*.)
- Erythrocyte. (See also *Blood cells*; *Hematopoiesis*; *Hemoglobin*; *Hemolysis*; *Polygythemia*; etc.)
 absorption spectra, and detn. of intracellular pH, 16337
 adsorption of methylene blue, mechanism, 14869
 agglutination, mechanism, 2519
 antibodies to human and sheep, production in rabbit, 2594
 bacteriophage absorption by, 6159
 basophilic, leaded water causing, 14995
 basophilic, aggregations in newborn infants and rats, 10916
 in silicosis and tuberculosis, vs. Pb exposure, 5875
 of birds, asexual development of *Plasmodium* in, 8707
 development, 15004
 multiple malaria infection, 1555
 Ca and K in, exercise as affecting, 12652
 Ca and Na in, 1991, 5512
 chloride distr., adaptation syndrome as affecting, 12643
 cholesterol in, 4243, 7335
 count, blood smear method, 9137
 chamber, spring clip for, 3612
 error of estimate with hemacytometer, 12643
 as influenced by:
 acclimatization to low atm. pressures, dog, 7581
 benzedrine, dog, 14841
 breathing pure O₂, 14587
 living in arctic regions, 3619
 vit. E, 5582
 of natives in Iraq, 5883
 relation to *Plasmodium* count, avian malaria, 6734
 cystine and cysteine in, kidney overstrain and, 16655
 decrease, in superoxygenated atmospheres, 13249
 derivation in birds and mammals, 5882
 diam. statistical analysis, India, 4320
 effect on healing, 3623
 electrophoretic mobility, 245, 7329
 elliptical, occurrence, 1965, 7933
 emulsion, Takata reaction, 14936
 envelope, optical detn. of thickness, 12643
 erythroblasts, in chorionic blood vessels, human embryo, 2161
 occurrence after hemorrhage, 16960
 fate in intraperitoneal transfusion, 1959
 fragility, in anemias, 632
 detn., reaction velocity of hemolysis and, 12722
 in hereditary hemolytic jaundice, 4246
 increased, in hemolytic anemias, 633
 in leuco-erythroblastic anemia, 7888
 normal in congenital hemolytic anemia, infant, 2349
 in tropical macrocytic anemia, 7878
 glutathione in, in rheumatic fever, 7885
 glycogen in, glucose, insulin, or adrenalin as affecting, 7343
 glycolysis, in cancer, diagnostic value, 14898
 group antigens in secretions vs., 938
 heat production in isotonic saline, 12687
 hematocrit tube, 10874
 hemolysis. (See *Hemolysis*.)
 heterogenetic agglutinin test for sheep, 859
 heterologous, blood-group hemolytic titers for, 17225
- Erythrocyte (continued)
 histamine in, 14493
 human, agglutinated by rat sera, 16866
 group-specific agglutinins for, in rabbit sera, 11568
 immature, in true erythremia, 7880
 inclusion bodies, review, 6158
 as influenced by:
 altitude, 10940
 anti-hemolytic factor in pig's plasma, 640
 Australian snake venoms, 14859
 gastric juice admin. to mother, newborn rat, 12643
 hydrosoluble acids, 13164
 isopropyl ether and gasoline, 7923
 liver in pernicious anemia, blood vol. and, 13253
 oxygen, 13129
 sodium cholesterone sulfonate, 4118
 inheritance of type, in pig hybrid, 7160
 life duration, rat, 12643
 life prolongation by spleen, 7384
 lipid in, permeability and, 14443
 macrophages, in fetus, antianemia principle and, 9619
 megaloblast, pathol. significance, 15003
 mobilisation after intravenous NaCl, 1981
 morph. in white tailed deer, 5886
 nicotinic acid in, 16304
 nucleated, and non-nucleated, reduction of methB in, 7382
 surface tension and other properties, 14445
 in obstructive jaundice, 16913
 organic anions and cations, 7250
 permeability, to glycerin, 3552
 to monoses, 3553
 reduction of salt in medium as affecting, 10837
 selective, 3553
 to sodium ion, dog, 10836
 phosphatides and cerebroside, in pernicious anemia, 641, 2394
Plasmodium gallinaceum in domestic fowl, 7862
 Feulgen reaction, 6758
 pneumococcal antigen relations to, 6112
 removal of malaria parasites from, 15953
 residue, post hemolytic, amino acid comp., 7330
 resistance. (See also *Hemolysis*.)
 body work as affecting, dog, 12651
 relation to erythroblastic anemia, 14923
 reticulocytes, count, in bleeding peptic ulcers, 647
 growth, nutrition and, rat, 2005
 in hemolytic anemia, 638
 in scurvy, mice, 326
 standards of maximum %, after liver therapy in pernicious anemia, 687
 use in recognition of bone marrow stim. by x-ray, 3577
 Fe as affecting, in anemia, 16911
 in malaria, 8685, 17921
Plasmodium and *Piroplasma* in, 12271
 response in non-tropical sprue, 13271
 sedimentation rate, blood-group detn. by, 9903
 detn., 3628, 9138
 as influenced by:
 heparin, 5506
 pilocarpine, 13187
 vitamins, 2572
 in intestinal parasitosis, 1540, 14192
 in leucemia, 18255
 in metastatic bone cancer, anemia and, 7839
 in pernicious anemia, lysocithin and, 5826
 in rheumatic carditis, 7884
 in rheumatoperiostitis, 16906
 in sickle cell anemia, 16912
 size of spleen and, 7885
 in soldiers, 1962
 of splenic blood, 1988, 3644
 standardization in children, 16822
 study, guinea pig, 11324
 use of heparin or citrate, 1993
 in Well's disease, 10880
 size, breathing pure O₂ as affecting, 14588
 and fragility, in hemolytic jaundice, 11334
 ventriculin as affecting, rat, 3961
 species-specific and homologous characters, Columbidae, 5343
 spherocytes, recovery ability, 3656
 spherocytosis, in hemolytic anemias, 633
 sphingomyelin in, comp., 1988
- Erythrocyte (continued)
 transfused, fate, 10897
 type-specific M and N factors in human organs vs., 17233
 vasodilator substance in, 2333
 of vertebrates, planimetric measurement, 667
 volume from birth onwards, mammalia, 3633
 wavelengths of bacteria vs., pathogenicity and, 6189
 Erythrocytometer, use, 9149
Erythroglossum (p.1860⁴), n. sp., 8384
 Erythroleucosis, transmission in chicks, 17387
 Erythromyelosis, acute, clin. path., 5827
Erythronium (p.1865⁵), n. combs., 8442
 albidum, gametophyte, development, (2n=44), 15518
 Erythrophloein, effect on heart, 11161
 11162
 Erythrophloeinum sulfuricum, effect on frog heart and vessels, 5732
 Erythrosin, sensitization of bacteria to biological action of light by, 15420
Escherichia, coliform intermediates, in human feces, 8301
 as indicators of fecal pollution, 8301
 intermedius type, differential medium for, 8275
 milk-containing media for, 10075
 mutations in, citrate + and - strains, 2771
 nitrogen metabolism, 2751
 in urogenital tract infections, 15263
 coli. (See also *Bacillus coli*; *Bacterium coli*; *Colon* group of bacteria; *Colon*-typhoid group of bacteria; *Colon*-typhoid-dysentery groups of bacteria.)
 aerobic metabolism in carbohydrate-rich media, 10082
 agglutinary relation to *Shigella dysenteriae*, 845
 agglutinin absorption between *Shigella dysenteriae* and, 2551
 between *Shigella paradysenteriae* and, 2551
 assimilation-respiration ratio, in suspensions vs. cultures, 13692
 bacteriophage, aging as affecting, 15571
 growth phenomena in, 9946
 as influenced by surgical dyes and antiseptics, 17283
 multiplication negative in bacterial filtrate, 15228
 bromine germicidal to, 4668
 chemotherapy of infections by, 11587
 in vitro, 13546
 comparisons of agglutinability and in vitro tests for, in chronic infections, 11671
 culture, effect on enzyme activity, 17891
 in culture media for *Paramedium*, 10519
 cytochrome oxidation by, 12706
 differentiation, optimum temp. for, 17457
 gas in Limberger cheese due to, 10065
 growth rate, age of parent culture as affecting, 6307
 hydrogen production from sugars and formic acid by normal vs. variant strains, 17463
 immunization to, oral vs. subcutaneous, 4524
 as influenced by:
 heteroauxin, 2747
 sulfanilamide, 2654, 8182, 13534
 sulfapyridine, 2654
 trilaetic acid, 2653
 ultraviolet, 4717
 intestinal, lecithin-soap therapy, 4563
 from Limberger cheese causing food poisoning, 2652
 mucoid variants, 17461
 peptidase, 2749
 peritonitis, antiserum therapy, 4525
 chemotherapy in animals, 17259
 sulfonamide therapy, 4555
 polysaccharides, antigenicity factors, 9900
 premunition to infection by, methods tested, 839
 reinoculation after vaccination for, agglutinating power of sera after, 840
 strains differing according to source, 844
 strains grouped serologically, 844

Escherichia (continued)

- coli (continued)
- toxicity of neutralized by plant growth, 8624
- vaccine, effect on tubercle bacillus infection and superinfection, 2560
- viability in reservoir-stored water, 13651
- in water, culture media for, 996
- in water plus organic substances, Cl as affecting, 15324
- mutabile, lactase activity, 10080
- 13680
- communion, growth, as influenced by carcinogenic and other hydrocarbons, 13703
- by lithium Cl, 17447
- Escherichia-Aerobacter* group of bacteria, ice cream mix pasteurization effects as criterion of efficiency, 17417
- milk content, culture media for detn., 6287
- Escherichia-Aerobacter* intermediate, N metabolism, 2751
- Eserin. (See Physostigmin.)
- Esocidae (Pisces), p.1879³
- Esophagus, *Capillaria* lesions in, domesticated fowl, 12263
- carcinoma, statistical study, Germany, 13199
- irritation, reflex effect upon heart, 12643
- nerve net, structure in mammals, 15013
- Esox (p.1879³). (See also Pike.)
- lucius, food, 12618
- masquinongy maculatus, growth rate, 8818
- Esparet. (See *Onobrychis*; *Sainfoin*.)
- Essential oils. (See under Oils.)
- Ester(s). (See also Phosphoric acid esters.)
- hydrolysis in intercellular medium, 7438, 7439
- as preservatives for food, etc., 11769
- Estrin. (See *Estragens*.)
- Estron(s). (See also Ovary.)
- activity, of benzpyrene, 387
- of desoxycorticosterone, in women, 12987
- of estrone β -naphthoate and estrone diethylaminoethyl ether, 9280
- non-steroid substances, 12965
- peripheral vascular, 12643
- of sterone glucuronides, 11251
- testosterone and androsterone as affecting, 5793
- androgen antagonisms, on ϕ rats, 11062
- /androgen ratio in adreno-genital syndrome, 651
- assays, comparative, of estrone and estradiol, 9327
- number of injs. as affecting, 9318
- on rat uterus, 5634
- in blood, absorption spectrum, 16436
- detn., 7600
- of ϕ and ϕ at menopause, 16436
- after menopause, 14645
- in blood and urine in labor, 2171
- carcinogenesis and, 595, 5808
- chemical state in ovaries of horses, cows and pigs, 9416
- chemistry, 3902, 3905, 3906
- 3907, 3918, 3919, 12947
- review, 9291
- colorimetric detn. of equilenin and dihydroequilenin, 3867
- comparison of subcutaneous and intravaginal units, 9304
- diethylstilboestrol, action, 11232
- antagonism to ϕ hormones, 9352
- effect on:
- ant. pituitary, 3877
- cocks and capons, 9352
- myelonic system, dog, 9380
- sex development, rat, 12955
- and estrone effects compared in rats and mice, 16606, 16607
- substitute for estrone in Clauberger test, 9302
- dihydroestrone, effect on food intake, diuresis and prolactin response in pigeons, 16589
- effect on:
- acetylcholine in uterus of ovariectomized rats, 9394
- ant. pituitary, 3834
- antibodies in blood, rabbit, 2130
- bladder capacity, cat, 16593
- blood Ca and calcification of bone, pigeon, 3883
- blood pressure, cat, 16627
- breeding in cattle, 16628
- Brown-Pearce epithelioma, rabbits, 596

Estrogen (continued)

- effect on (continued)
- bulbo-urethral glands of rhesus monkey, 2438
- Ca and fat metabolism, fowl, 12966
- castration and thyroidectomy cells in pituitary, rat, 3934
- cellular metabolism, 12961
- climacterium, 16928
- comb of cocks and hens, 9351
- constitutional deafness, 4285
- corpus luteum, 9317, 11069
- creatine metabolism, 9355
- development of mullerian ducts, duck, 17048
- of tumors in genital tract, 2118
- endometrium, 4276
- epididymis in castrate rats, 9326
- excitability of uterus, rat, 9326
- functional uterine bleeding, 5855
- gastric acidity, 2109
- genital tract of *Didelphys*, 7969
- genitalia of ϕ castrates, 9322
- of ϕ and ϕ , 5620
- glucose tolerance, insulin antagonism and, 7893
- gonads, endocrine glands and mammary glands of lactating rats, 16980
- of frog larvae, 16982
- gonadotropic activity of pituitary, rat, 3794
- gonadotropic activity of urine of menopausal women, 5628
- growth of iris epithelial cultures, 3853
- hemolysis, 12763
- pH and flora of vagina, 428, 16590
- hyperthyreosis, rat, 14653
- lipid metabolism, bird, 3697, 3699
- mammary adenofibroma, rats, 597
- mammary carcinoma, ϕ mice, 7857
- extracts, mammary glands, in castrates, 5864
- growth by inunction, 7546
- ϕ mice, 12996
- monkey, 11100
- mammogenic activity of pituitary, rabbit, 3826
- menstrual disorder, 9645
- motility of ϕ accessory genital organs, 16622, 16623
- muscular activity, rat, 3881
- organs, 9279
- ova transport, ovariectomized mice, 5651
- ovulation, monkey, 9413
- parturition, man, 3971
- pituitary of rat, 16990
- prostate and seminal vesicles of monkeys, 16991
- pullets, ovario-genic virilism and, 11416
- rats, 12643
- reproduction in mouse, 9307
- resistance to toxic substances, 12929
- response to prolactin, 14620
- seminal vesicle, mouse, 12951
- in ocular transplant, rabbit, 3868
- sex in chickens, 5667A
- sex cycle, dog, 7574
- rat, 3813
- sex development, opossum, 9349
- intersex and rat, 14680
- sex differentiation in amphibians, 5900
- in mammalian embryos, 15079
- in mouse, 13043, 13044
- in opossum, 11409
- sex in embryo after adm. to pregnant rat, 12643
- sex organs of immature cats, 16993
- testes, thyroid and comb of adult cock, 9296
- testis development, 11053
- thymic involution, rat, 3802
- thymus and development, rat, 15997
- tuberculosis, 14627
- tumor malignancy, 14899
- uterine tumors, 14892
- uterus, intestine and, 9290
- mouse, 592, 3822
- prolonged treatment, guinea pig, 5643
- vagina, and mammary glands, 11405
- in vitro, guinea pig, 3829
- vagina, dog, 14687
- vaginitis and menopause, 9643
- water intoxication of adrenalectomized rats, 380
- wt. of thymus, rat, 9333
- wound repair in uterine tissue, rats, 9696
- equilenin, synthesis, 12931

Estrogen (continued)

- estradiol esters, effect on ovariectomized rats, 11061, 11062
- potency and properties, 5641
- in etiology of hydrops fetus universalis, 2170
- excretion after injection, horse, 3944
- in fibroadenomatosis mammae, hist., 4229
- hexoestrol effects, 16596
- Hydrogenation products of equilenin, physiological action, 3811
- hypophyseal adenoma and, 5813
- inactivation by liver, 381
- spleen and, rat, 14618
- isoequilenin A, potency, 2122
- isolation from pregnant mare urine, 2126
- lipemia and calcinemia induction in cock by, 5517
- in melancholia, 9639
- metabolism, 12643
- paradoxical effects, counteracted by testosterone esters, mice, 4281
- in ϕ inhibited by progesterone, mouse, 16616
- and pituitary extract, effect on ovaries of genetic ϕ ϕ , *Rana*, 11412
- in placenta, 2165
- in delayed pregnancy, man, 9428
- in production of pituitary adenoma, 16877
- of stomach tumor, 4217
- production by prolactin, carcinogenesis and, 4269
- progynon-B effect on lactogen content of rat pituitary, 3888
- reduced to estradiol by yeast, 9386
- relation to breast tumors, rabbits, 13203
- to sexual specificity of tumors, 14886
- response, cholesterol feeding as affecting, 14635
- review, 14644
- role in hen feathering of fowl, 2167
- in tumor etiology, 16885
- in sexual-skin, 3790
- significance of synthetic, 3812
- sources, types, effects, 9641
- subcut. inoculation, tumorigenic action, 16865
- substitutes for estrone in Clauberger test, 9302
- synthesis, 3825
- tests and units, 2129
- theelin, isolation from human placenta, 3928
- from sow ovaries, 3927
- in tissues in pregnancy, man, 3879
- toxic action, in dogs, 3922
- in treatment of juvenile adiposogenital dystrophy, 385
- triphenyl ethylene, effect on vagina, 5636
- ultraviolet as affecting, 7278
- urinary calculi due to, mice, 7536
- urinary excretion after inj. of testosterone, monkey, 16603
- in urine, in advanced pregnancy, human, 11057
- extraction for bioassay, 9113, 9122
- source, 9286
- testosterone as affecting, 14964
- useful hystero-trophic vs. tumorigenic dose, guinea pig, 12970
- uterine bleeding after single injection, monkey, 2120
- Estrus. (See also Menopause; Menstruation; Ovarian; Ovary; Pregnancy; etc.)
- adaptation to damaging agents, rat, 12643
- behavior of sow and, 7975
- changes in ovary during, rat, 9411
- in wt. and water content of uteri during, 9411
- diestrus, pseudopregnancy due to electrical stim. of cervix in, rat, 415
- in domestic mammals, review, 7577
- effect on adrenal insufficiency symptoms, 5623
- on patency of uterotubal junction, rabbit, 9418
- factors controlling, review, 14639
- ginseng as inducing agent, 1347
- induction in anestrous cats with sex hormones, 12643
- as influenced by:
- desoxycorticosterone, 12997
- estrogens, rat, 3813
- estrone, castrate rat, 14643
- gonadotrophin, cat, 11101
- inaction, rat, 3975
- Jensen sarcoma, rat, 4190
- light, rat, 9298
- pineal, 16586
- pregnancy urine, dog, 9332

- Estrus (continued)
 as influenced by (continued)
 removal of neocortex, rat, . . . 14679
 temp., humidity, feeding, exercise
 and light, rat, . . . 3860
 testosterone, mouse, . . . 1620
 vit. A deficiency, rat, . . . 9358
 vit. B, hyperthyroid rats, . . . 5732
 and menarche in gorilla, . . . 5669
 and menstruation, monkey, . . . 5669
 persistent, in a strain of rats, . . . 16660
 response, localization in brain stem,
 study, dog, . . . 2223
 study, dog, . . . 7574
 visual pathways concerned in, ferret,
 . . . 13071
 Ethanol, 2,2,2-trialkyl, anesthetic proper-
 ties and synthesis, . . . 544
 Etheloclorinus (p.1871³) (Cb), n. sp., . . . 10555
 Ethoostomidae (Pisces), p.1880¹
 Ether, anesthesia, carbohydrate metab-
 olism in, . . . 7432
 effect on:
 blood chem., dog, . . . 11219, 11220
 heart rate, dog, . . . 11248, 11249
 pH of cortex and electrocortico-
 gram, . . . 12643
 resistance to pneumococcal infec-
 tion, rabbits, . . . 625
 spinal dog, . . . 12643
 volume of plasma and extra-
 cellular fluids, . . . 252
 recovery sequence after, rat, . . . 2174
 divinyl. (See Divinyl ether.)
 effect on:
 chromosomes, *Tradescantia*, . . . 1710
 heat center, . . . 13073
 heat formation in brain, . . . 7760
 lactic acid in brain, . . . 5788
 respiratory reflexes, . . . 14817
 solubility of 3-4 benzpyrene, . . . 7834
 expectorant action, . . . 5758
 isopropyl, gasoline and, physiological
 effects, . . . 7923
 overdosage, metrazol in, . . . 13178
 peroxides, effect on tumor production
 by wheat germ oil, rats, . . . 4186
 stability, . . . 13178
 Ethnobotany. (See also Fiber plants; Food
 plants; Medicinal plants; Plants,
 economic.)
 forest products used by Indians of
 western N. America, . . . 3019
 of Kiowa Indians, western U.S.A.,
 . . . 12475
 of Old Empire Maya (Mexico), . . . 10294
 Ethopodidae (Myriopoda), p.1873⁴
 α-Ethylapocupreine, local anesthetic ac-
 tion, . . . 5729
 Ethyl benzamidomalonate, α-amino acid
 synthesis with, . . . 14484
 Ethyl bromide, fatal syncope due to,
 dog, . . . 14818
 Ethyl carbamate. (See Urethane.)
 Ethyl chloride, fatal syncope due to,
 dog, . . . 14818
 Ethyl dibromstearate, effect on liver fatty
 acids, rat, . . . 5603
 Ethyl lactate, toxicity, . . . 4131
 Ethyl mercaptan, effect on animal tumors,
 . . . 575
 Ethyl nitrate, toxicity, factors affecting,
 . . . 14824
 Ethyl oleate, effect on liver fatty acids,
 . . . 5603
 Ethyl strychnine sulfate, effect on glu-
 tathione in tissues, rabbit, . . . 16754
 Ethylene, effect on:
 growth of plants, mechanism, 1367
 respiration, apples, . . . 10825
 respiration and O metabolism,
 potato, . . . 17694
 ripening of fruits in storage, 3009
 epinasty caused by, produced by
 plant tissue, . . . 6614
 fruit spot of stored apples due to,
 . . . 1446
 production by fruits, . . . 10327
 detn., . . . 17735
 relation to respiration, . . . 4943
 chlorhydrin, effect on glucoside syn-
 thesis by potatoes, . . . 5585
 on induced dormancy, potato, 1366
 diamine, saponin-like action, . . . 16772
 dichloride, fumigant for sweetpotato
 weevil, . . . 12187
 poisoning, . . . 7928
 glycol, marine egg permeability to,
 . . . 16303
 toxicity and pharm., . . . 9552, 16753
 oxide-α, β-dicarboxylic acid, molds pro-
 ducing, . . . 17407
 as fumigant of potatoes, . . . 8642
 toxicity to *Cimex lectularius*, . . . 10461
 Ethylenimine, pharm., . . . 9559
- Ethylhydroucupreine HCl, in blood vs.
 tissues, blood transfusion as af-
 fecting, . . . 9893
 Ethylxanthines, pharm. and chem., . . . 9564
 Etiolation. (See Chlorophyll; Chlorosis;
 Variegation.)
 EUACANTHELLA (Homopt.) (p.1875⁴), . . . 18016
 Eubacteriales (Bacteria), p.1861¹
 Eubalaena (p.1883³) australis, anatomy
 and biology, from northern and
 southern hemispheres, . . . 1659
 Eublema (p.1877¹) anabilis, predator on
 Laccifer, India, . . . 14102
 Euborellia annulipes, as interm. host of
 poultry nematode, . . . 10473
 Eubotrys (p.1866⁴), n. comb., . . . 15507
 Eubranchnus (p.1872²) pallidus, larvae, 8746
 Eucalyptus (p.1866²), spp. adapted to
 Argentina, . . . 6530
 burning of slash as affecting, . . . 9020
 cultivation in Anatolia (Turkey),
 . . . 1308
 diseases, in S. Africa, . . . 10380
 fiber tension in, . . . 8536
 planting, . . . 8528
 as windbreak, for orchards, . . . 15616
 deglupta, planting, . . . 13918
 globulus, growth rate, . . . 12000
 marginata, hollow stems of penetrated
 by zamia palm roots, . . . 17767
 size classes in irregular stands,
 . . . 17661
 morrisbyi, . . . 17518
 obliqua, natural regeneration of, . . . 17653
 pauciflora, new fungus on, . . . 8407
 punctata, Pseudolembostia on, . . . 8407
 Eucarida (Crustacea), p.1874²
 Eucerceris (p.1878⁴), review, key, . . . 6929
 Eucheldia, protective coloration, . . . 10775
 Euchlaena, and origin of maize, . . . 16166
 Euchlanidae (Rotatoria), p.1871²
 Euchlanis (p.1871²), n. sp., . . . 6807
 Euchlena, as hybrid between Zea and
 Tripsacum, . . . 13823
 Eucladium verticillatum, photosynthetic
 rate measured, . . . 1069
 Euconus (p.1876²), n. spp., . . . 6880, 14246
 Eucopopoda (Crustacea), p.1873²
 Eucoryphia, tax. and distr., . . . 10125
 Eucoryphiaceae (Dicotyledones), p.1866²
 Eucrypta (p.1867²), tax., . . . 4779, 17520
 Eucia (p.1874²), n. sp., . . . 10587
 † Eucyclius (p.1872²), n. spp. (J), . . . 15943
 Eudemis botrana, effect on grape fermenta-
 tions for wine, . . . 11772
 Euderma (p.1882²) maculatum, in Cali-
 fornia, . . . 7088
 Euderus pempheriphila, parasite of cotton
 stem-weevil, . . . 14266
 Eudiatropis (p.1873²), note, . . . 6887
 zachariast, illustrated, . . . 6842
 Eudiatylia (p.1871²), syn., . . . 17962
 Eudyptes (p.1881²), from Australia, 10641
 species characters of immature birds,
 . . . 7001
 Eugenes (p.1861³), food habits, . . . 9064
 Eugenia (p.1866²), n. spp., . . . 2828A
 . . . 4785, 6437
 Eugenics. (See also Genetics; Heredity.)
 and birth control, in U. S., . . . 8962
 birth rate of Wellesley college gradu-
 ates, . . . 8959
 and maize, . . . 62
 morbid inheritance in isolated rural
 community, . . . 3473
 program of socio-economic reform,
 Sweden, . . . 8961
 racial degeneration in Germany, . . . 7165
 relation to human welfare and progress,
 book, . . . 3407
 sterilization law in Finland, . . . 1803
 surveys of population since 1933,
 Germany, . . . 1799
 value of kindred file for study of de-
 fectives, . . . 1800
 Eugeitrichum (p.1862⁴), as subgenus of
 Geotrichum, . . . 4638
 Euglena (p.1868²), Golgi apparatus, 1721
 Golgi apparatus and vacuole system,
 . . . 8915
 anabaena, growth rate in relation to
 population density, . . . 7184
 gracilis, autotrophic nutrition in, 10525
 populations associated with bacteria,
 growth in cultures, . . . 7187
 mutabilis, morphology, . . . 14197
 var. lefevrei, . . . 14197
 rubra, morphology, . . . 12283
 Euglenales (Algae), p.1860⁴
 Euglenida (Protozoa), p.1868¹
 green and colorless, affinity, . . . 5101
 nutrition, . . . 12281
 vacuolar system, . . . 5101
 Euglenidae (Protozoa), p.1868¹
- Euglenophyceae (Algae), p.1860⁴
 Euglobulin, affinity for amylose, sp. as
 affecting, . . . 7372
 in blood. (See under Blood, proteins.)
 prep. and comp., . . . 4575
 Eugregarinida (Protozoa), p.1868⁴
 Eulamellibranchia (Mollusca), p.1872³
 EULEPTOLEOTRIS (Pisces), . . . 1637
 Eulia mariana, seasonal abundance and
 sex ratio in, . . . 10389
 Eulota similis, as interm. host of poultry
 fluke, . . . 14157
 Eumerus spp. control by vapor-heat, in
 bulbs, . . . 12196
 Eumycetes, of India, 433 spp., . . . 2811
 tuberculosis organism relation to, 2748
 Eunarcos, anesthesia, circulatory drugs
 as affecting, . . . 4169
 effect on metabolism, rabbit, . . . 7778
 on vasomotor reflexes, . . . 16752
 toxicity, rabbit, . . . 16766, 16767
 Eunice, reflexes in, . . . 462
 Eunotia (p.1860³), n. spp., . . . 8376
 Eunotiaceae (Algae), p.1860³
 Eunuchoidism, androgen and estrogen in
 urine, testosterone and, . . . 14964
 Euodia (p.1866²), n. sp., . . . 6431
 Eupragia (p.1878⁴), synopsis, . . . 6919
 Euparyphus (p.1877²), n. spp., . . . 18004
 Eupatoriastrium (p.1867⁴), n. sp., . . . 13751
 Eupatorium (p.1865⁴), n. sp., . . . 6437
 purpureum, pith, cell shape of, . . . 17558
 Eupaverine, spasmolytic action, . . . 4104
 Eupelmella (p.1878²) pedatoria, parasite
 of cotton stem-weevil, . . . 14266
 Eupelmus tachardiae, parasite of Laccifer,
 . . . 14102
 urozonos, parasite of cotton stem-weevil,
 . . . 14266
 Euphanta (p.1875²) pokiana, on cocco,
 New Guinea, . . . 14107
 Eupharynx (p.1879²), related to apodal
 fish, . . . 8805
 Euphausiacea (Crustacea), p.1874²
 Euphorbia (p.1866²), spp. identity, 13756
 medicinal and poisonous spp., . . . 1317
 new and little known African spp.,
 . . . 1127
 delightonii, . . . 10128
 heterophylla, embryo sac development,
 . . . 2913
 wulfenii, latex tubes, recovery after
 puncture, . . . 6624
 Euphorbiaceae (Dicotyledones), p.1866²
 Euphrosyne (p.1871²), n. spp., . . . 6816
 Euphrosynidae (Annelida), p.1871¹
 Euphrasacarus (p.1874²) pulchrus ssp.
 pisgahi, . . . 17982
 EUPHYLLOPHORUS (Echin.) (p.1872⁴)
 type E. granulatus, . . . 3294
 Euplana (p.1869²), restored, . . . 10540
 Euplanaria (p.1869²), tax., . . . 17934
 syn. of Dupesia, . . . 10541
 dorotocephala, axial susceptibility to
 serum antibodies in, . . . 7611
 cytotoxicity after u-v irradiation, fac-
 tors affecting, . . . 7183
 reconstitution and head frequency,
 supersonic waves as affect-
 ing, . . . 7627
 tigrina, introduced into Germany, 8733
 multiple head formation in, . . . 13348
 sexuality, . . . 17934
 Euplectes (p.1882²), breeding ecology, 165
 Euplectrus (p.1878²) platyhypenae, in biol.
 control of army worm in Hawaii,
 . . . 3208
 Eupodidae (Arachnida), p.1874²
 Eupodotis barrowi, new tapeworm from,
 . . . 15987
 Eupomotis (p.1880²) gibbosus, shelters in
 Michigan lakes, . . . 9060
 microlophus, age and growth, . . . 5408
 parasites, . . . 15948
 † Euposteus (p.1879²), relationships, . . . 6971
 Euproctis chrysorrhoea. (See Moth, brown-
 tail.)
 phaeorrhoea, contact poisons for, biologi-
 cal assay, . . . 17885
 EUPROTA (Homopt.) (p.1875⁴), . . . 18016
 Euprosopia (p.1877⁴), n. spp., . . . 14254
 Eupteromalus (p.1878²) viridescens, hyper-
 parasite of Apanteles, . . . 5067
 Eurema (p.1876⁴) sanjaniensis, . . . 6936
 Euricaria (p.1875²) splendens, on cocco,
 . . . 14107
 Euricea, lymphatics and associated blood
 vessels, development, . . . 9686
 Eurota (p.1877²), tympanal organ morph.,
 . . . 10617
 Eurotiaceae (Fungi), p.1861²
 Eurya (p.1866²), n. sp., . . . 6429
 Euryalid, ecology, . . . 8877
 Euryblepharon, in dog, . . . 15390

- Eurydema oleraceum*, ecology,.....12580
Eurydema (p.1878*) *lividi-cornus*, on
Coleophora pruniella,.....14109
Eurygaster testudinaria, ecology,.....12580
Euryleptidae (Platyhelminthes), p.1869²
Eurypterida, p.1874¹
†*Eurypterus*, phylogeny,.....12333
Eurytoma (p.1878*) *prometheocae*, para-
site of cotton stem-weevil,.....14266
saliciperdae, in willow gall,.....1625
samsonovi, life history, host plants,
control,.....17858
Eurytoma (p.1869*) *komareki*,.....17940
Euscelsis striatulus, on cranberry, control,
.....6692
Euschistus impictiventris, damaging cotton,
.....10407
EUSCHONGASTIA (Arach.) (p.1874*)
americana, from *Eutamias*,.....3314
Euselachii (Elasmobranchii), p.1879¹
Eusiroides, critical notes,.....3307
Eusthenia (p.1875*) *spectabilis*, larva of,
fore wing-sheath in, terminology,
.....3364
wing-sheaths in, growth formula,
.....3362
Eusthenopteron (p.1879*) *foordi*, vertebral
column,.....5163
Eustrophinus (p.1876*) *lesnei*,.....16031
Eustylochus (p.1869*), of east coast N.
America,.....6798
syn. of *Stylochus*,.....10540
Eutamias (p.1882*), n. species of chigger
from,.....3314
minimus borealis, dogwood berries as
food of,.....14312
Eutermes, mound, humidity and moisture
conditions,.....1829
Eutettix (p.1875*), new species from Aus-
tralia,.....18016
tenellus, life hist. and distrib.,.....8645
migration to beetles, and control expts.,
.....12182
weedy plants as breeding hosts, 5385
Euthisanotia (p.1877*) *brevipennis* meta-
morphosis,.....5141
Euthynnus alletteratus, *Capsale* from, 10544
EUTHYONIDIUM (Echin.) (p.1872*), type
E. seguroensis,.....3294
Euturla excorians, from surfers foot,
.....13623
Eutrichomastix colubrorum, cholesterol as
growth factor,.....14166
EUTRIKINA (Dipt.) *fasciata*,.....6896
EUTROMBICULA (Arach.) (p.1874*), *Me-*
crothrombidium alfreddugesi type,
.....3314
Eutypa lata, v. *ribis*, causing dieback of
Ribes spp.,.....15795
turnerae (*Dothideovalsa*),.....18736
Eutypella (p.1861*), n. spp.,.....17499
Euvira (p.1876*), n. sp.,.....6867
Euxesta (p.1877*), n. sp.,.....6895
Euxoa defersa, blood pulsations, in larvae
of,.....17852
Evaporation. (See also *Atmometer*; *Hum-*
idity; *Transpiration*; *Water*.)
calibration of atmometer,.....3490
differences on slopes of ridge, Indiana,
.....3511
from land and water surfaces, detn.,
.....16248
measurements, factors affecting, Ohio,
.....8992
rate, from eastward facing slope, Iowa,
.....12566
in forest, open park and cleared
areas,.....10763
in spruce fir forests, stratification of
animal societies and,.....8998
recording from porous atmometer cup,
.....10758
of tree trunks in different habitats,
.....10757
Eventognathi (Pisces), p.1879³
Evergestis rimosalis, population on cruci-
fers,.....5045
Evergreen(s). (See *Conifers*.)
Everia buoliana. (See *Rhycacionia buoliana*.)
Evipal soluble, novocaine convulsions con-
trolled by,.....530
Evipan, anesthesia, circulatory drugs as
affecting,.....4169
effect on:
central chronaxie,.....13177
metabolism, rabbit,.....7778
vasomotor reflexes,.....16752
sodium, action, age and wt. as affecting,
pig.,.....7757
toxicity, rabbit,.....16766, 16767
Evisceration. (See *Viscera*, *ablation*.)
Evodia (p.1866*), n. spp.,.....4783, 15505
Evolution. (See also *Mutation*; *Phylogeny*;
etc.)
of anatomical structure in man,.....11380
of animals, rôle of psychic factors in,
.....14389
of ants,.....8871
of arthropods, changes of position of
appendages during,.....1694
biogenetic law and recapitulation,
critique,.....3439, 3443
book,.....1692
of brain in relation to macular develop-
ment in monkeys,.....11433
causes, critique,.....12500
of extinction of vertebrate spp., 5081
chemical basis,.....8901
convergence and parallelism in Embi-
tera,.....6942
data from biota of isolated archipelagos
of different ages,.....5283
differential rates in Pliocene rodents,
.....7057
of dioecism from functional hermaphro-
ditism, theory, *Vitis*,.....1753
of disease-producing organisms,.....8899
effects of selection in social insects,
.....3442
extreme developments at end of evolu-
tionary series,.....8902
gene and,.....3444
gene frequencies under irreversible mu-
tation, distr.,.....1737
of genetic systems, book,.....7124
group ascendance, and needs of superior
individuals,.....8922
hypothesis of gene divergency,
Drosophila,.....16204
inheritance of acquired characters, new
evidence,.....3440, 3441
irreversibility of loss of organs, 10577
Lamarckism vs. mutationism, book,
.....14313
of mammals,.....3418
of man, rôle of skull base length in,
.....17016
origin of life, book,.....7090
orthogenetic trends,.....8898
of Phalaridae and Oryzae, chromosome
studies,.....5290
phylogeny of animal kingdom,.....3438
of pituitary gland in vertebrates,.....5898
.....5899
re-birth,.....12499
relation of generic to specific characters,
.....8900
relation to Marxism,.....5256
rôle of environment in, philosophical
disc.,.....10674
natural selection in,.....14341
sexual selection theory, present status,
.....1693
of social behavior, in vertebrates, 8883
of social life in animals,.....8996
of species, ecological isolation and, 9035
struggle for existence, mathematical
treatment,.....10671
of subterranean asellids, growth and,
.....16498
of taurodontism in primates,.....11439
of tetrapod shapes,.....9679
theory, social factors in growth of
Darwinism,.....5282
of viruses,.....35
Evotomys (p.1882*), absence of Y chromo-
some,.....7121
glareolus, pyloric adenoma due to
Capillaria,.....12266
Exanthematic typhus. (See *Typhus*.)
Exarmidium (p.1861*), n. sp.,.....15458
Excelsin, sulphhydryl groups in,.....7284
Excitation. (See also excitable tissues,
e.g., *Muscle*; *Nerve*.)
Excreta. (See *Feces*.)
Excretion (animal). (See also under spe-
cial organs of excretion, e.g., *Kid-*
ney, *Skin*, *Vacuole*, *contractile*; and
under substances excreted, e.g.,
Sweat, *Urine*, etc.)
of pigment at moulting, migratory
locust,.....12183
Excretion (plant). (See also *Guttation*.)
of ions by roots, corn,.....13976
of N, by yeast,.....1397
of sugar, by *Impatiens sultani*,.....17739
Exenterus sp., as parasite of *Diprion*, 10432
Exercise. (See also *Athletes*; *Body activity*;
Fatigue; *Muscle*; *Training*; *Work*;
etc.)
alcohol metabolism and,.....275, 276
book,.....1884
for children, syllabus,.....9579
effect on:
blood comp. dog,.....10918
in schizophrenia,.....12798
blood P, rat,.....16424
blood pressure, pulse, and coronary
blood flow,.....7711
body development,.....16708
Ca and K content of erythrocytes and
plasma,.....12652
carbohydrate metabolism,.....14534
cardiac output, in failure,.....7717
circulation in extremities,.....5722
circulatory system,.....14778
electrical polarity,.....12643
electrocardiogram anoxemia and,
.....13198
erythrocyte resistance, dog,.....12651
growth in avitaminosis A, rat, 10998
hearts of anemic children,.....16823
heart rate in sympathectomized dogs,
rôle of vagus in,.....11076
heat loss from nude body,.....280
kidney function,.....2145
knee jerk threshold,.....12643
lactic acid production in heart
disease,.....13116
liver fat, rat,.....7522
metabolism, rat,.....10964
after sucrose and galactose inges-
tion,.....277
oxalic acid excretion,.....12826
pulmonary capacity,.....16573
R.Q. and blood sugar,.....9495
sedimentation rate,.....1962
spleen in dogs and rabbits,.....15008
sympathectomized, cats,.....9488
total energy metabolism, rat,.....10963
vital capacity,.....2115
vit. C in urine,.....13024
heart configuration in young athletes,
.....12643
maximum on a bicycle, inertia as affect-
ing,.....16718
prolonged, cardio-respiratory effects,
.....2014
tolerance, in angina pectoris, O₂ and,
.....16743
Exoascaceae (Fungi), p.1862²
Exoascus (p.1862*) *varius*, synonymy, 6351
Exobasidium camelliae, on *Camellia japonica*,
host-parasite relations,.....15841
Exocarpus (p.1865*) *psilotiformis*,.....8438
Exocoetidae (Pisces), p.1879³
Exophthalmic goiter. (See under *Goiter*.)
Exophthalmos, of Grave's disease, patho-
logical physiology,.....11351
hist. of orbital fat tissue deposits,
.....14978
measurement in laboratory animals, ap-
paratus for,.....7328
Exoprosopa (p.1877*), n. sp.,.....6903
EXORCHINAE (Platyh.) (p.1869*), n. sub-
fam.,.....6803
Exo-skeleton. (See *Skeleton*.)
Expectorants, pharm.,.....5758
Expectoration, mechanism,.....16574
Expedition, botanical, of Mexico,.....3422
Singapore,.....1673
to Glacier Bay, Alaska,.....7191
Malaspina, redescription of ferns col-
lected by,.....1097
to Oregon, of John Jeffrey,.....16132
Ruwenzori, to British E. Africa, publi-
cations,.....12494
Second Byrd Antarctic geographical
descr. of region explored, 7216
Templeton Crocker to Gulf of California,
.....134
Exploration, botanical, China,.....6
oceanic,.....8413
Extract(s). (See under particular organs
and tissues, e.g., *Liver*; *Muscle*;
Ovary; etc.)
Extremities. (See *Limbs*.)
Exudates. (See also *Ascites*.)
inflammatory, chemotactic and permea-
bility factors in, 5815, 5816, 5817
effect on exptl. tuberculosis,.....9966
Exudation, daily cycle in rate, *Helianthus*,
.....6597
indoleacetic acid as affecting, *Pisum* and
Helianthus,.....4919
Eye. (See also *Blindness*; *Ophthalmia*; *Oph-*
thalmology; *Optics*; *Vision*.)
ablation, effect on sex cycle, toad, 3956
absence of one in fetus,.....17055
accommodation in mammals,.....4000
adaptation, crustacea,.....442
dark, brightness threshold, detn.,
.....11126
liver disorders and,.....2074
reduced O₂ tension as affecting,
.....13056
response to light, grasshopper,
.....4002
to white light, *Samia*,.....4003
measurements,.....9469
anterior chamber, adrenal transplants
in, rats,.....3924, 5901
heteroplastic thyroid transplants in,
rabbits,.....9671

Eye (continued)

- aqueous humor, as blood ultra-filtrate, 7377
- protein passage from blood into, 14495
- rate of formation, 251
- sodium distr. between blood and, cat, 14500
- bilaterality, factors affecting, *Hyla*, 739
- changes, in diagnosis of avitaminosis A, 14953
- in malignant hypertension, 9527
- choroid diseases, review, 7640
- ciliary body, extracts, effect on ocular and blood pressures, dog, 12975
- ciliary muscle, innervation, rabbit, 16681
- color, in Eskimos, 11440
- factors, interaction, *Drosophila*, 5345
- hormones controlling, *Drosophila*, 5649
- tests for in insects, 7149
- temp. as affecting, *Habrobracon*, 1764
- color perception. (See *Vision, color*.)
- color substances, compared in *Drosophila*, *Ephestia*, *Habrobracon*, 1760
- conjunctiva. (See also *Conjunctivitis*; *Xerophthalmia*.)
- epithelium of trachomatous, tissue culture, 8213
- local immunity to toxins in, 6104
- cornea, absorption lines, childhood, 14868
- astigmatism, total astigmatism and, 13061
- cocaine as affecting drug conc. and, 16803
- dystrophy, iontophoresis in treatment, 3550
- epithelium, nutrition, and vascular obliteration for keratitis, 9474
- virus culture on, 2622
- factors affecting anesthesia, 7800
- in industrial diseases, 14987
- reaction to mineral dusts, rabbit, 18281
- sensitivity, drugs and destruction of nervous connections of eye as affecting, 2210
- spindle cells in, relation to leucocytes, 4368
- ulcer, Mooren's, 9473
- staphylococcus-induced in rabbits, therapeutic agents tested by, 15261
- vascularization in riboflavin deficiency, rat, 2059
- defects. (See also *Astigmatism*; *Hemianopia*; *Myopia*; *Strabismus*.)
- congenital cataract, man, 1792
- measurement of exophthalmia in laboratory animals, apparatus for, 7328
- deformity (hereditary) of iris and corpus ciliare in horse, 2694
- development in *Idothea*, 9794
- differentiation, in silk worm, 9796
- dise, edema, in hypertensive encephalopathy, 11171
- diseases, blood chlorides in, 13067
- treatment with grenz rays, 14473
- disorders, in malnutrition, 13274
- electrical response from temp. as affecting, grasshopper and moth, 12643, 14704
- as factor in vision, 5688
- fatigue, study, 4004
- fixation and preservation of pathol. structures, 5918
- fixational pause, 14699
- flicker response, contour for *Sphaerodactylus*, 11125
- temp. and critical illumination for, 18053
- fluid, intraocular, secretion mechanism, 2203
- function, history, 14325
- in ultra-violet light, fish, 13057
- fusional movements, role of peripheral retinal stimuli in, 7639
- glaucoma. (See *Glaucoma*.)
- grafts, size regulation during starvation of hosts, *Ambystoma*, 11374
- heredity and, man, 7162
- immunity relations in exptl. syphilis, 2522
- as influenced by:
- atropin, frog, 13176
- brucellosis, 4614
- hydrogen sulphide, 13284
- renal hypertension, 2271
- intensity thresholds, for red and violet light, 7634
- for white light, 7633

Eye (continued)

- intraocular pressure, allergically conditioned changes in, 9482
- high, reduction by sorbitol inj. into blood, 7379
- iris, leiomyoma and hematoma, cases, 7831
- muscle, drugs affecting, 11216, 13150
- physiol. and pharm. reactions, 4045
- potassium Cl as affecting, 11254
- sphincter, autonomic drugs as affecting, 13155
- structure, 8004
- pigmentation and, 15049
- tissue cultures, estrogens and androgens as affecting, 3853, 3854
- transplants, regulative phenomena, amphibia, 5959
- yellow pigment in, carotenoid nature, chicken, 16678
- lactoflavin in, fish, 2217
- lens, accommodation changes of posterior surface, 2209
- capsule, permeability to Ca, parathyroid hormone as affecting, 9076
- cataract. (See *Cataract*.)
- induction in amphibia, 4392
- N in cataractous and sclerosed, 9481
- posterior pole, axial shift during accommodation, 13064
- lesions, in arterial hypertension due to renal ischemia, dog, 2379
- in onchocerciasis, 15960
- lid, carcinoma, course and therapy, 14897
- conditioned responses, reinforced differential characteristics, 7623
- fold, Mongolian, occurrence in central Asia, 9740
- types in Europeans, 9722
- superficial lymphatics, 7938
- light absorptive powers of various parts, 9463
- movements. (See also *Nystagmus*.)
- recording methods, 441
- muscles, binocular coordination, 9470
- imbalance, correction, 7647
- recession, entity, technic and principles, 7645
- nematode in, man, 8737
- nictitating membrane, pressor amines as affecting, 5730
- reflexes, spinal pathways for, cat, 16684
- sensitivity to adrenalin and acetylcholine, chronic decentralization as affecting, 4028
- of nocturnal lemuroids, monkeys and man, structure, 11433
- occurrence of accessory ciliary ganglion, 15050
- ocular pressure, factors controlling, dog, 12975
- oculogyric crises, metastases of cervical carcinoma and, 4211
- palpebral slit, upper lid, and socketing of bulbus oculi, deser., 8030
- photography, 3
- pigments, relation to food level, *Drosophila*, 3462
- responses, *Idothea*, 16682
- role in visual excitability, 2200
- pineal, as photoreceptor, *Anolis*, 14701
- polarity potentials, measurements, 14707
- polypeptidase in, 5441
- postrotatory reactions, luminous stimulus as affecting, 16315
- production in early chick blastoderm, 9759
- pupil, dilatation, dark adaptation and, 16677
- role of sympathetic nervous system in, 14738
- as influenced by:
- atropine salts, 14846, 14847
- faragine I, 7787
- homatropine, 14857
- hyoscyamine and scopolamine isomers, 16773
- ophthalmic drugs, 9560
- procaine, cat, 14831
- sodium citrate and Na propionate, 14847
- innervation and pharmacological reactions, 9560
- review, 9460
- width, detn., 1948
- reflexes. (See also *Reflexes*.)
- pupillary, anoxia as affecting, 5699
- during digestion, 7643
- refraction, excitement and, rabbit, 16681

Eye (continued)

- refractive errors of children, changes in types, 2340
- retina, action potentials, nicotine as affecting, 440
- anatomy in opossum, 2425
- angiomatosis, 2365
- artery, measurement of pressure, 13131
- capillary circulation, study, 14753
- Os content in mammals, 5920
- dark adapted, different adapting wave-lengths as affecting, 9458
- sensitivity to light and visual purple conc., 13055
- directional sensitivity and spectral sensitivities of rods and cones, 13059
- fovea, binocular summation at threshold, 11123
- sensitivity, measurement, 9469
- gastroectomy as affecting, dog, 9477
- gene for degeneration, rat, 8945
- Kolmer's droplets as artifacts, 8006
- metabolism, 10982
- papilledema, etiology, test, 5865
- pigment, in Laurence-Moon-Biedl syndrome, 13196
- light intensity and, crustacea, 442
- migration, eye-stalk extracts as affecting, 14650
- position, flicker response contour and, 13052
- porphyropsin system, fish, 13060
- position, threshold stimulus intensity and, 7629
- response to insulin, thyroxin and epinephrin after adrenal-ectomy, 12989
- rhodopsin, properties, 444
- rod-cells, protein-lipoid system in, 13058
- visual purple action on, 2204
- scotopic visibility curve, 2211
- stimulation, peripheral, role in fusional movements, 7639
- structure in teleosts, 13814
- vessels, chemicals as affecting, 14773
- visual purple, chem., 2212
- regeneration, 12643
- restitution as a monomolecular reaction, 16681
- sedimentation constant and mol. wt., 439
- vit. A deficiency as affecting, rat, 10399
- scleromalacia perforans, path., 2385
- sclerotic plates, in *Sphenodon*, 5879
- scotoma, study, 2353
- seminal vesicle transplants in, rabbit, 3868
- size regulation between eyeball and lens, *Ambystoma*, 11448
- stalk, extracts, melanophore expanding extracts of pituitary and, 4403
- hormone, effect on melanophores and water uptake, frog, 12643
- structure in epigean and cave isopods, 5126
- relation to vision, 3408
- tissue, citric and malic acids in, 16354
- creatine and creatinine detn. in, 16353
- transplantation, in *Bombix mori*, 17152
- in *Drosophila*, 1781, 9781
- tumor, propagation in, fowl, 14904
- types, mongoloid, in anemia, 5931
- unsteadiness, deviations and, 11129
- uvea, sensitization by staphylococcal synergic action, 6076
- vision preference, 2206
- vitreous humor, congenital cyst, 5804
- partition of NaCl, glucose, and urea between blood and, selacil, 12746

F

F 883. (See *Benzodioxane, diethylamino-methyl*.)

Fabaceae (Dicotyledones), p.1865⁴
Fabræa maculata, apple leafspot due to, 3108

Fabrics. (See *Textiles*.)
 Fabroniaceae (Bryophyta), p.1863⁴
 FACCIOLLELLA (Pisces) (p.1879²), 6974
 Face. (See also *Ear*; *Lips*; *Jaws*; *Mouth*; *Nose*; etc.)

carcinoma, incidence, 4195
 lesions, trichomonads in, pig., 1554
 measurements, racial differences, 17006
 pain, surgical treatment, 7668

- pseudomongoloid, in anemia, 5981
types in Africa, 9726
- Facial nerve. (See *Nerve, facial*.)
- Factor(s), genetic. (See *Genes*.)
- Factor V, in blood, nicotinic acid as affecting, 7353
- FACULTA** (Lepidopt.) (p.1877²), 16040
- Fagales (Dicotyledones), p.1865¹
- Fagals (Dicotyledones), p.1865¹
- Fagara*, n. sp., 4783
- Fagopyron tataricum*, colchicine-induced tetraploid, 16186
- Fagopyrum* (p.1865²). (See also *Buckwheat*.)
- esculentum*, nitrate storage, 116
- phloem development and flowering, 10172
- Fagus* (p.1865²). (See also *Beech*.)
- orientalis*, in Greece, 10159
- silvatica*, in French Pyrenees, 13952
- rootrot, due to *Phytophthora* spp., 15798
- Falcipennis* (p.1881²), habits in Siberia, synonymy, 16105
- Falco* (p.1881²), spp. banding, 14296
- food habits, 9064
- new nematode parasite, 17960
- peregrinus*, in, 8853
- tinnunculus*, nesting with other spp., 5177
- Falcons, peregrine, breeding, habits, 16066
- Falconidae (Aves), p.1881²
- Falconiformes (Aves), p.1881²
- Fallopian tube. (See *Oviduct*.)
- Fallowing. (See also *Tillage*.)
- effect on weed growth, 16260
- Famine. (See *Inanition*.)
- Faragine I, mydriatic action, 7787
- Farancia abacura*, *Dasytremata* (trematode) from, 6784
- Farinosae (Monocotyledones), p.1864⁴
- Farmer, John B., portrait, 7075
- Fascia, grafts in tendon defects, 712
- lata, saphenous opening, anatomy, 709
- psaos, fibroma, guinea pig, 4208
- Fasciation, of mulberry, 6663
- Fasciola* (p.1869⁴) *gigantica*, in man, Hawaii, 17916
- hepatica*, concomitance with *Schistosoma*, 14192
- distribution, snail population as affecting, 12261
- egg shell formation in, 1594
- evolution in *Lymnaea*, 14192
- incidence, Cuba, 6720
- liver lesions, ruminants and swine, 12260
- longevity, 6743
- origin of egg shell, 14192
- possible rôle in production of hepatic carcinoma, 2362
- in sheep, 5091
- Fasciolaria gigas*, host for *Lophotaspis*, 5111
- Fasciolidae (Platyhelminthes), p.1869⁴
- FASCISTA** (Lepidopt.) (p.1877²), 16040
- Fasting. (See also *Hunger*; *Inanition*.)
- effect on:
- arginase action of body organs, 12668, 12677
- ascorbic acid in tissues, 13275
- blood sugar, dwarf mice, 7360
- crop-sac response to prolactin, 16589
- hippuric acid synthesis, 13013
- intestinal flora, 8148
- liver fat, rat, 802
- liver pigments, 14584, 14585
- serological and sero-cytological phenomena, 8148
- urea synthesis, 13016
- reducing substance in urine in, 11089
- refeeding and effect on milk production and lactation, 16450
- Fat(s). (See also *Adipose tissue*; *Fatty acids*; *Glycerides*; *Lipids*; *Oils*; and under fatty products, e.g., *Butter*, *Cod liver oil*, *Lard*.)
- absorption and deposition, rat, 7441
- in fish, 7442, 7443
- as influenced by:
- adrenalectomy, rat, 9247
- adrenalectomy and iodoacetic acid poisoning, 12643
- giardiasis, children, 17920
- phloridzin, 9253
- by lymphatics, 7367
- hemolytic agent in lymph during, 351
- rate, hydrogenation and oxidation as affecting, rat, 3693
- acyelic constituents, review, 14440
- in amoeba culture, 12279
- in bacon pigs, factors affecting, 9797
- Fat (continued)
- in *Blighia sapida*, effect on toxicity, 6550
- in blood. (See under *Blood*.)
- body, ant. pituitary extract as affecting, fowl, 12643
- of sea birds, 7445
- brown and white, glycogen in, rat, 5540
- carotene in, value, 3717
- in coconut oil, 16493
- in conifer needles, relation to hardness, 3086, 14025
- content of plankton samples, detn. method, 5412
- for deep-frying of doughs at high altitudes, 10060
- deficiency, effect on rats, 5546, 5547
- disease of rats, essential unsaturated acids and, 7440
- fatty acids of liver in, 7447
- deposition, in denervated fat tissue, 9200
- during negative N balance, 5992
- factors affecting, pig, 10986
- depot, component glycerides in, ox, 303
- sucrose feeding as affecting, rat, 12821
- in testes, inanition as affecting, rat, 16492
- of Virginia white-tailed deer, comp., 14541
- in diet. (See under *Diet*.)
- digestibility in *Amoeba*, 8721
- dynamic effect and net energy value, 14524
- edible, rancidity in, 10049
- 10050, 10051
- effect on:
- availability of carbohydrate, 2029
- exptl. tumors, 14874
- gastric secretion, drugs and, 5583
- uric acid excretion, man, 9187
- in exptl. arterial lesions, 16727
- from farm products, industrial use, 13842
- in feces, detn., 210
- of fish, chemical comp., 10052
- formation from carbohydrates by *Endomyces vernalis*, 8334
- malabsorption, report, 16567
- metabolism in depancreatized dogs, 3683
- endocrine control, bird, 3697, 3699
- in fat free diet, man, 7436
- in idiopathic steatorrhea, 3694
- as influenced by:
- alpha cells of islet of Langerhans, 376
- ant. pituitary extract, 3874
- estradiol, fowl, 12966
- sulfanilamide, 5757
- testosterone, 2000
- vit. B, pigeons, 9231
- rats, 3724
- intermediary, methods and apparatus for study, 7305
- ketosis, ketolysis and, 7444
- in *Lucilia* larvae, 266
- mesencephalic control, 3692
- in pigs, 9809
- rôle of liver lipins in, 7505
- in milk. (See *Butterfat*.)
- of mouse typhoid bacillus, 10073
- in muscle, factors affecting, phloridzin, rat, 12643
- natural, carcinogenesis and, 7830
- necrosis. (See under *Necrosis*.)
- in *Neolitsea* seed and fruit-coat, chem., 10291
- oxidized, cancerogenesis and, rats, 9592
- oxidizing enzyme, of pork, 10049
- pork, oxidation susceptibility, 10050
- protein utilization and, 2492
- in protoplasm, ultraviolet as affecting, 1902
- rancid, effect on vit. A, 2058
- on vit. E, 7495
- rancidity, in cold-stored fish, 10032
- in foods, review, 17404
- sclerosis (Keilmann's), in infant, 605
- staining with sudan black B, 714
- in sugarcane, variety and N fertilizer as affecting, 17577
- synthesis from carbohydrate and protein, rat, 10987
- site in mammary gland, 2162
- transport and phosphorylation, spectrophotometric study, 14540
- in *Tropaeolum* seed, chem., 10292
- vit. B₁ sparing action, 7446
- Fat body(ies). (See also *Adipose tissue*.)
- changes in cells during pupation, *Calliphora*, 7123
- development, in crocodile, 15067
- in wings of pupal *Ephesia*, 4401
- Fatigue. (See also *Athletes*; *Exercise*; *Heart*; *Muscle*; *Nerve*; *Sensation*; *Work*.)
- biochem. aspects, 474
- due to cigarette smoking, 548
- effect on postural steadiness, 7696
- on resistance to coryza, 11547
- energy variations and, 4051
- index, perceptual fluctuation as, 9440
- as influenced by epinephrine, 4134
- hypoglycemia, man, 10966
- length of work period and, 11116
- Fatsia japonica*, hormone distribution in leaves, light as affecting, 15721
- stomatal movement, factors affecting, 8593
- Fatty acids. (See also *Fats*; under specific acids.)
- absorption, phloridzin as affecting, 9253
- in blood. (See under *Blood*.)
- in corn oil, 12821
- deposition and utilization, 10987, 12821
- deutero-, prep., 1940
- effect on fungus growth, 972
- on glucose fermentation by *Aerobacter*, 11768
- essential, acrocinia and, rat, 5547
- rats, 7440
- intercellular transformations of esters and, 7438, 7439
- of liver in fat deficiency disease, 7447
- metabolism, 9199, 16493
- passage into lipins and glycerides of body, D as indicator, 7505
- polyglycerol esters, utilization, 7435
- salts, dissociating power, 7449
- synthetic odd C, metabolism, 12820
- Fatty peroxides, effect on vit. A, 7473
- Fauna(s). (See especially *Geographic Index* (p.1884); *Zoogeography*.)
- littoral, of Puget Sound, 8872
- in relation to artifacts of microlithic industry in caves of Italy, 9719
- Faustula* (p.1869⁴) *keksooni*, redescri., 15990
- Favotrichophyton* (p.1863³) *decipiens*, skin disease due to, 4633
- Feathers. (See also *Molting*; *Plumage*.)
- as age indicators of quail, 14434
- amino acid composition, 7977
- defective, new sex-linked gene, naked, in domestic fowl, 1772
- development of after-feather, domestic fowl, 699
- ♀ sex hormone as affecting form and color in ♂, 8955
- keratin from, sp. specificity, 4346
- structure, tax. validity, 18080
- Zn content, 7978
- Feces, ascorbic acid in, detn., 10864
- Bacillus acidophilus* in, in dyspeptic breast-fed infants, 17304
- bacterial pathogens, differential medium for, 8275
- Bacterium aerogenes* and intermediate type incidence in, 13647
- Bacterium alkaliscens* in, in normal infants, 17316
- bovine, coliform bacteria from, classification, 1061
- Streptococcus zymogenes* in, 8342
- coliform intermediates in human, 8301
- diagnosis, methods, 9998
- of parasites, efficiency, 17895
- technic, chap., 14164
- of pinworms, methods, 15971
- recovery of cysts and ova, technic, 3239
- dry wt., diet as affecting, 2013
- fat, in Addison's disease, adrenal cortical extract and, 16938
- detn., 210
- fungi isolated from normal, 8252
- ground sloth, plant fossils in, Arizona, 7048
- horse, N in, drying and, 11486
- Streptococcus zymogenes* in, 8342
- oxalic acid in, 12826
- poliomyelitis virus isolated from, 17377
- Pseudomycoderma matalense* from, 4638
- Pseudomonella dysenteroides* from, in dysentery epidemic in children, 17378
- rectal, collection technic for bacteriol. study, 13646
- sulphur, detn., 3588
- tubercle bacilli in, demonstration method, 8257
- typhoid bacilli in, isolation media, 11658
- urobilinogen in, detn., 12728

- Fecundity.** (See *Birth rate; Fertility; Statistics, vital.*)
- Feeble-mindedness.** (See also *Eugenics; Idiocy; Intelligence.*)
analysis, in 487 children,.....3475
clinical and genetic study,.....2414
inheritance,.....5359
in Laurence-Moon-Biedl syndrome,.....13196
sleep motility in,.....9446
- Feed(s).** (See also *Diets; Foods; and under specific feeds, e.g., Alfalfa, Forage plants, Hay, Maize, Milk, Potatoes, Silage, and under Live-stock and specific animals, e.g., Cattle, Poultry, Sheep, etc.*)
abortion in mares and,.....8324
amides and urea as, sheep,.....5999
ammonium salts as, sheep,.....11488
coconut meat and corn as, pigs,.....4404
consumption, appetite and, growing cattle,.....5978
corn and corn cobs as, food value, 5990
corn and legume hay as, cattle,.....5981
cottonseed cake as winter supplement for cattle,.....15101
for dairy cattle, limited vs. liberal grain on pasture,.....782
protein in,.....9818
S. D., (See *Digestibility.*)
digestibility, (See *Digestibility.*)
distillers' by-products as,.....2504
effect on coccidiosis mortality, chicks,.....8237
energetic efficiency of productive processes in farm animals and, 7398
forage crops as, lignin content as affecting and method of detn.,.....15534
N as affecting,.....2932
grass as, factors determining value,.....17595
grass and forage plants as,.....6493
green, acidified, chem. and bacteriol. study of silage from,.....17398
A.I.V. method of preserving,.....13689
grit requirement of granivorous birds,.....5423
legumes as, Puerto Rico,.....18793
linseed cake as, HCN removal from,.....4403
lupine silage as,.....5983, 5988
molasses grass as, Argentina,.....15558
mulberry leaves as,.....3000
oat mill feed as, livestock,.....11472
oils as, effect on butterfat yield,.....4409
pellets, for poultry,.....2514
pickled herring as, pigs,.....11476
for poultry, rations and composition,.....783
proso, for swine,.....781
protein in, comparative values, for chicks,.....15125
source and level, for dairy cattle,.....11495
protein concentrates, for calves, 15095
for dairy cattle,.....9818
protein supplements as, fowl,.....6019
range grasses as, at various seasons,.....1204
range plants as, seasonal changes in comp.,.....13809
roughage, moisture detn.,.....2494
sorghum roughage as, sheep,.....11482
sugar beets as, K and P as affecting,.....6466
sugar beet leaves as, K and N as affecting,.....6464
sulphur in, detn.,.....3588
tuberculosis transmitted to pigs by,.....4675
turnip tops as, for pigs,.....15094
utilization, (See *Digestibility.*)
value, corrected, based on fiber variations,.....5976
for livestock,.....4405
of pasture grasses, for cows, S. Africa,.....15546
vit. A in, detn.,.....13351
vit. D in mixed, stability,.....3738
weed timothy seed as,.....5989
- Feeding.** (See also *Diet; Feeds; Foods; Food habits.*)
abundant vs. restricted, effect on longevity, *Daphnia*,.....431
of infants, Bavaria,.....5797
breast and artificial xerophthalmia and,.....2351
FELDMANNIA (Algae) (p.1860*),.....11804
Felichthys (p.1879*) *stauroforus* (N), skull,.....10627
Felidae (Mammalia), p.1883*
Felis (p.1883*), (See also *Cat(s); Lion.*)
concolor cougar, in Wisconsin,.....5222
gougarounds tolluca, in Arizona,.....5219
Felodistomidae (Platyhelminthes), p.1869*
- Fen.** (See also *Bog; Marsh; Swamp; Heath.*)
valley, peat deposits, analysis,.....16254
Fence row(s), insect communities,.....15904
Fennecus zerda, liver cells, intranuclear crystals in,.....4358
Fenusia pusilla, weight and abundance of, sun vs. shade leaves as food, 5053
- Ferment(s).** (See *Enzymes.*)
- Fermentation.** (See also *Enzymes; and under specific substrates and end products.*)
in acidified green fodder silage, 17398
adenosine prep. by,.....1893
aerobic, in plant meristems,.....1394
alcohol production by *Saccharomyces ellipsoideus*,.....1025
alcoholic, of wood sugars,.....11770
phosphorylation of adenosine by yeast,.....10985
anaerobic, of citric acid,.....13671
in bog mud of Lake Pomoria,.....17428
in bread dough, book,.....15393, 15394
dextralactic acid, rapid process for,.....11773
of glucose, by *Aerobacter indologenes*, aldehydes and fatty acids as affecting,.....11768
history, work of Schoen,.....10704
lactic acid formation during,.....1890
light as affecting,.....1389
molasses, bone dissolution by,.....4689
by propionic-acid bacteria, CO₂ utilization in,.....15398
reactions, streptococci group-specific substances correlated with, 2541
by *Rhizopus*, compared to higher life forms,.....4696
Zn as affecting,.....12061
rum,.....4687
in sauerkraut, factors affecting,.....2729
regulation,.....15397
silage,.....4688
in sugarcane, after freezing,.....17587
in tea manufacture, mechanism,.....17406
of tobacco,.....1030
by *Torulopsis pulcherrima*,.....6269
wine,.....10087, 10038
by yeasts, amino-acid degradation products as affecting,.....6271
- Fern(s).** (See also *Filicales.*)
dorsiventrality of prothallia, factors causing,.....17699
gametophyte, (See *Gametophytes.*)
Japanese, taxonomic notes,.....1106, 1108
of N. America, book,.....11847
of S. E. United States, book,.....6376
tracheal elements in,.....17552
Fernaldia (p.1866*), n. spp.,.....11900
Fernbach, A., biography,.....10699
Ferrat, distemper, inclusion bodies in,.....6168
and lymphocytic choriomeningitis associated,.....13591
hormones affecting liver glycogen, 12952
survival of adrenalectomized with hormone treatment,.....5623
visual pathways concerned in gonadal stim.,.....13071
- Ferric.** (See under *Iron.*)
- Ferricyanide**, Na, kidney function test study,.....14673
- Ferrous.** (See under *Iron.*)
- Fertility.** (See also *Birth, rate; Fruit setting; Reproduction; Sterility.*)
animal, of artificially fertilized sheep,.....3467
of Brazilian bean beetle, temp. extremes as affecting,.....14386
of Chinese women,.....418
of cross-bred mice,.....8951
of domestic animals, review,.....12552
early identification of infertile hens' eggs,.....791
as influenced by:
factors, man,.....3486
hyperthyroidism, rat,.....7591
inbred sires, White Leghorn fowl,.....97
opening the ovarian bursa,.....7590
sunlight, dairy cattle,.....775
vit. B, in massive doses, rat, 16528
vit. E deficiency, rats,.....5846
inheritance, man,.....16212
preservation in ♂ rats by α-tocopherol adm.,.....12643
of proved aged bulls,.....773
of Wensleydale sheep,.....1765
plant, of *Agropyrum-Triticum* hybrids,.....1748
of *Gossypium* hybrid,.....7129
of *Lactuca* hybrids,.....5294
and polyploidy, *Tulipa* spp.,.....16190
of salmon, cross- and self,.....4850
- Fertilization.** (See also *Conjugation; Egg(s); Embryology; Fertility; Parthenogenesis; Pollination; Reproduction; Sperms.*)
cross, (See *Hybridization.*)
animal, artificial, of dairy cattle,.....773
of fowl and turkey,.....15091, 13836
review,.....5985
of sheep,.....3467
textbook,.....5974
using gelatinized semen,.....5975
delayed, effect on development of ovum, guinea pig,.....8043
effect on cortical layer of *Arbacia* egg,.....8059, 8060
of eggs of *Psammochinus*, metabolism during,.....11462
self, induced by various agents, *Ciona*,.....4389, 4390
plant, abnormal in *Fucus* (alga),.....1068
double, (See *Endosperm; Embryosac; Xenia.*)
selective, in *Oenothera berteriana*,.....10719
union of green-alga gametes, rôle of secretion and u.-v. light,.....10805
unnecessary for endosperm formation,.....6449
in *Utricularia* (Dicot.),.....2907
- Fertilizer(s).** (See also *Manures; Soil; etc.*)
acid-forming, effect on potato scab,.....15867
for alfalfa,.....13794
ammonium sulphate, effect on fertilizer value of volcanic ash,.....17608
on pastures,.....4853, 4854
for apples, cyanamid as,.....15610
France,.....1278
for beans, effect on root rot,.....3155
for black currants, effect on yield and leaf spot,.....3008
for blueberries, Mass.,.....17622
bone, dissolution by molasses fermentation,.....4689
for broccoli, England,.....17639
for celery,.....13874
for cereals,.....4833, 11933
for clovers, Vt.,.....4839
for clover and timothy, Sweden,.....6455
for coffee, Hawaii,.....13875, 17624
for corn, Mass.,.....17570
for cotton, effect on carbohydrates,.....1185
on *Fusarium* wilt,.....1481
proper placement, North Carolina,.....5038
for crop plants, effect on mineral content,.....15528
dicyandiamide as,.....4844, 17430
distribution,.....4827
for drug plants,.....6555
effect on:
As injury, cotton,.....5031
Azotobacter in citrus orchard soils,.....17442
changes in celery in storage,.....1258
chem. composition of grasses, Transvaal,.....10202
composition of cotton plant, bark and roots,.....13814
disease resistance,.....15844
drought resistance, red pine,.....15774
foliar diagnosis, corn,.....8567
growth of pine,.....17657
nitrification in citrus orchard soils,.....17442
nitrifying and denitrifying power of soil,.....1043
nutrition and growth of spruce seedlings,.....1297
pasture composition and feed value,.....4840
peas with peg-sickness,.....1472
plankton production in ponds, 16284
protein composition, leaves and whole plants,.....8539
quack grass, yield and protein content,.....4830, 8460
respiration, grass and oat leaves,.....4944
sap composition, *Eleusine coracana*,.....8056
soils, water and nitrate content, 8468
wheat,.....8452, 17601
for forest-tree seedlings,.....15674
for forests, Switzerland,.....15627
for grapes, Ark.,.....6493, 10189
for grassland, effect on white clover,.....10180
guanylurea as,.....17430
herbicides as,.....13836

- Fertilizer (*continued*)
 for Ladino clover, Oregon,15568
 for lespedeza, var. differences, .13838
 lime, effect on soil pH and porosity,4822
 use in forest plantations,13932
 manure as, straw and peat as affecting,15544
 method of applying, effect on vegetables,13902
 on *Vicia villosa*,8472
 for muck crops, Indiana,1238
 for muck soils, Michigan,1240
 for mulberry, effect on leaf quality,8679
 nature and distr. of residues, in old fertility plats,2970
 new,4820
 N, for crop plants,15569
 detn.,10209
 effect on:
 grasses, NaNO_3 vs. $(\text{NH}_4)_2\text{SO}_4$,10202
 pH of muck soils,1248
 nicotine synthesis, tobacco,4823
 N in grasses,15557
 N in plants,10182
 sugar beets,6468, 6464, 6465
 tobacco,2919
 in filter cake, availability to sugar cane,2922
 N, leaching from soils,2964
 time of applying to forage crops, effect on yield, Scotland, 17590
 for nursery soils, Kans.,15613
 for oats, silicates as,15529
 orange waste as,15617
 for orchard grass, soybeans, and medicinal plants,1340
 for pastures,2932, 17573
 for peach trees,2986, 15607
 for peanuts, N. Carolina,15538
 for peas for canning, Wis.,15535
 for pecans,1229, 3004
 phosphates, colloidal Fla. as,18822
 detn.,10206
 effect on:
 nitrifying capacity of soils,4826
 nutrition of spruce seedlings,13948, 13949
 sugar beets, comp. and feed value,6466
 vegetables, Ohio,13869
 for pineapples,2984
 placement tests, potato,10185
 for podzol soils, Quebec,8481
 potassium, effect on sugar beets,6464
 role in plant nutrition,4915
 supplies in U. S. A.,2945
 for potatoes,4832, 4838, 10372
 11936, 11939, 13977, 13978
 for pyrethrum, relation to pyrethrin content,6474
 for raspberries, Kansas,15591
 for rejuvenating old meadows, Canada,8465
 relation to crop production,11955
 requirements of soils, Pa.,15571
 retention by sand, relation to tomato culture,6508
 in soil, as influenced by exchangeable cations,10208
 by pH,6522
 by tillage,4863
 movement and fixation,1215
 types compared,8455
 utilization by lespedeza, limestone as affecting,10175
 for rice, P. I.,1210
 for rubber, Ceylon,2999
 for Scotch pine,1447
 for shade trees, method of application and effect on root system, 10219
 for snap beans, S. O.,17584
 sodium, effect on strawberries, .13891
 in soil, NH_3 evolution in winter from,10071
 for soil nematode control,1465
 for strawberries,1277, 13891, 15815
 for sugar beets,6470, 13815
 for sugar cane, filter cake as,2922
 for sweet potatoes,13877, 15567
 for tobacco,4913, 15542, 17582
 for tomatoes in greenhouses, Ohio,1245
 for truck crops, U. S. A.,2983
 use in forestry,15669, 17656
 of minor elements in,1198
 in pine forests,10263
 for vegetables, on muck soils,1248
 volcanic ash as,8482, 17576, 17608
 for wheat,4911, 15543
 for white pea beans, Mich.,11949
 for winter grass, Gt. Britain,6462
- Ferulaic acid, chologogue action,4151
 Fescue. (See *Festuca*.)
Festuca (p.1864³), n. sp.,8444
 spp., seed germination, factors influencing,8467
 unusual alpine form,1102
idahoensis, chemical composition, seasonal changes in,10195
rubra commutata, seed viability, temp. and moisture content as affecting,10193
 Fetal membranes. (See also *Placenta*.)
 chorion-allantois of chick embryo, as culture medium. (See under *Chick*.)
 of *Citellus*,4381
 development in rat,5950
 Fetus(es). (See also *Births*; *Embryos*; *Parent-offspring relationship*; *Pregnancy*; etc.)
 age, detn. by ossification centers, 8022
 anatomy of Asiatic elephant, 5947, 5948
 blood distr. between placenta and sheep,7576
 brain potentials, drugs as affecting, rabbit,7656
 changes in shape and position of stomach and appendix,4382
 cholesterol in adrenals, man,9425
 choroid plexus, onset of secretion,1964, 1990
 cochlea, electrical responses, guinea pig,2216
 development of behavior, sheep,11115
 distr. of collagenous fibers in hyaline cartilage, growth changes, 9706
 embryotrophic nourishment, calf, 6125
 erythrocytes, gastric juice given to mother as affecting, rats,9619
 finback whale, circulatory system, 675
 foramen ovale, premature closure,11455
 hydrops universalis, hormones in etiology,2170
 immunity transmission to, mechanism,6098
 intestinal movements in anoxemia, cat,3769
 isoelectric point of cells, man,9086
 liver extract, antipernicious anemia factor in, cattle,11385
 lobation of neutrophile leucocyte in dead fetus in utero, rat,246
 malformed, origin of defects,9777
 movements, Ca and K deficiency as affecting,7603
 with one eye,17055
 O_2 consumption in, sheep,10962
 palatine tonsil, vascularity,5889
 resorption during pregnancy, strain difference, rat,16657
 respiratory movements vs. blood gases in, cat,873, 8977
 sarcolemma of skeletal muscle, origin,11447
 swallowing in, gastrointestinal peristalsis and defecation, proof, 12643
 treatment of mother with pregnancy urine as affecting,2154
 vit. C in blood,419, 421
 water and dry substance in body of,2044
 wt. correlated with size of placenta,11098
 Feulgen reaction, in *Plasmodium gallinaceum*,6758
 use in cytology,5265
 Fever(s). (See also under specific fevers, e.g., *Malaria*, *Typhoid*, etc.)
 artificial, blood Cu in, rabbit,12830
 effect on cardiac activity and pulse, Louisiana,12643
 on teeth,13306
 electrolyte balances and loss through skin,5657
 insulin action in,14536
 lactoflavin and ascorbic acid as affecting,13156
 effect on hemolytic streptococci in blood,815
 on urea clearance in rheumatism, 407
 glucose tolerance in,8276
 gonococci, heterobacteria as affecting,883
 gonococcus thermal death time in, 4652
 iodides inducing,4465
 Lahore canine, pathology and hemocytology,14187
 neurogenic, reduction by nembutal,2240
 quercitrin as affecting,7772
Rickettsia-induced and louse-borne,13562, 13563
- therapeutic, animal expts.,8186
Borrelia, inoculation sites compared,4630
 effect on ascorbic acid in blood and urine,3732
 fluid balance in, control by plasma specific gravity detns.,7334
 hemorrhage in, pathogenesis, 10943
 in leprosy, effect on blood,257
 lymphocytopenia in,10939
 neurosyphilis chemotherapy plus,15180
 in ophthalmic diseases,13432
 pathological effects,12688
 splenic vol. and polycythemia in, dog,7370
 of syphilis in rabbits,8186
 vit. C metabolism in,2080
 whooping-cough, heterobacteria as affecting,882
 Fiber(s) (animal). (See *Hair*; *Wool*.)
 Fiber(s) (plant). (See also *Cotton*; *Flax*; *Hair(s) (plant)*; *Paper*; *Textiles*; *Wool*; etc.)
 cotton, behavior in cuprammonium solns.,3101, 3102, 3104
 length, relation to maturity,8463
 tensile strength, development as affecting,17551
 microfibril, in plant cellulose,8445
 origin and length in monocot leaves,10169
 separation method,6467
 tension, in woody stems,8536
 in textiles, identification and labeling practices,13968
 x-rays as affecting *Apocynum*,1387
 Fiber plants. (See also *Cotton*; *Jute*; etc.)
 of Mexico,10294
 Fibrin, base-protein-acid compounds prepared from,16298
 of blood, catalase action,14449
 pro. platelet agglutination by,10882
 role in blood coagulation,12743
 split study,13178
 Fibrinogen. (See also *Blood coagulation*; *Thrombin*.)
 destruction by urea and other hydro-tropic substances,3639
 fibrillar-colloid state, blood coagulation and,12771
 preparation,7296
 Fibrinolysis, diptheria antitoxic pseudoglobulin disaggregated by,4497
 of hemolytic streptococci, specificity and action,9857
 quantitative relation of antifibrinolysin and,4481, 4487
 Fibrinolysis, by *Clostridium* filtrates, factors affecting,4440
 of hemolytic streptococci, pathogenic role,4519
 of streptococci, sulfanilamide as affecting,11600
 tests, oxalated plasma preservation for,15115
 Fibroblasts, growth in vitro,740, 741
 5953, 9766
 tolerance to alcohol,2469
 Fibrovascular system (bundles, tissue). (See *Vascular system, plant*.)
 Fibularia (p.1872³) cimex (Tertiary),16007
 Fibulariidae (Echinodermata), p.1872³
Ficus (Dicot.) (p.1865³), keys,4780
 latex from, as anthelmintic,15696
 elastica, latex bleeding, effect on osmotic pressure,6626
 Field experimentation. (See under *Agriculture, experimentation*; *Horticulture*.)
 Fievre boutonneuse. (See *Pustular fever*.)
 Fig, leaf blights (*Corticium* spp.), in Louisiana,1481
 tree borer (*Ptychodes*), in Louisiana, life hist. and control,6694
 Figitidae (p.1878³), predator of aphids, Ont.,10451
 Filaria. (See also *Filariasis*; *Microfilaria*; *Wuchereria*.)
 in eosinophilic abscesses of lymph glands,14180
 larvae, development in mosquitoes,10483
Filaria spp., in Ceylon,12249
perstans, in natives, E. Africa,10503
 Filariasis. (See also *Filaria*; *Microfilaria*; *Wuchereria*.)
 Ceylon,12249
 chemotherapy,17243
 climate and,14391
 in dogs, New England,1539
 in domestic animals, Dutch E. Indies,8245
 effect on mosquito,8694

Filariasis (continued)
 endemic, review, Fed. Malay States, 5094
 genital fistulous knotty, gonococcal (?) etiology in African form, 11638
 with hyper eosinophilia, 14180
 microfilaria in day blood, staining technic, 17902
 monkey as reservoir, Fed. Malay States, 6752
 periodicity, dog, 5095
 transmission, 8714
 Mass., 12262
 vectors, infection tests, Batavia, 15968
Filariidae (Nematoda), p.1870³
Filarinema (p.1870³) *peramelis*, from *Isodon*, 14214
FILATIMA (Lepidopt.) (p.1877³), 16040
Filberts. (See also *Corylus*)
 diseases, in Oregon and Wash., 15889
Filifish, orange. (See *Alcutora schoepfi*)
Filibranchia (Mollusca), p.1872³
Filicales (Pteridophyta), p.1863¹. (See also *Fern(s)*)
 tracheal elements in, 17552
Filinia (p.1871⁴), n. sp., 6807
Filiniidae (Rotatoria), p.1871⁴
Film(s). (See also *Membranes*)
 of denatured protein, 1886
 detn. of tension in fluids, 16388
 mono-, antibody-antigen specificity oriented by, 17125
 oil-water phase boundary potential, salts as affecting, 16306
 protein, multilayer, 16295
 reactions, address, 16305
 from starch and gelatin, physical properties, 12021
 stearate, antigen-antibody reactions between layers absorbed on, 11554
 tension and elasticity, detn., 16388
 Filters, air, testing of commercial, 10010
 bacterial, 9997
 pore diameter, technic of detn., 15419
 Chamberland, porosity, detn., 11616
 Filterability. (See *Viruses*)
 Filterable agent, pyogenic, in sarcoma 39 of white rats, 613
 in respiratory-tract infection, 17287
 from tumors, characteristics, 4199
 Filterable forms. (See also *Viruses*)
 polyarthritides of rats due to, 15360
 of tubercle bacillus, 8364
 Filter-cake, as N fertilizer, for sugar cane, 2922
 Filtrate(s), bacterial. (See also *Antiviruses*, *Beesredka's*)
 effect on mouse sarcoma 180, 2357
 Filtration. (See also *Viruses*; *Water*, *purification*)
 bacterial, technic, 9997
 pollen extracts prepared by, 17140
 ultra-, pore diam. detn. for, 15419
 of Paschen bodies, 2624, 2627
 virus particle size determined by, 15246
Fimbristylis (p.1864³), n. spp., 1118
 11871
 Finch, Bengalese, psittacosis in, 954
 scarlet, nesting habits, 16076
 Finger(s). (See under *Digits*)
 Finger-prints. (See *Dermatoglyphics*)
Finsciurus anerythrus, *Wenyonella* from, 1576
 Fir. (See also *Abies*)
 Douglas. (See *Pseudotsuga*)
 silver, wood wasp damage and control, 15926
 white, new aphid on, 18015
 Fire(s). (See also *Burning*; *Forest*, *fires*)
 effect on grassland, S. Africa, 9014
 on soil and vegetation, 5013, 9020
 in land use and management, 12590
 succession after, forest species, 13925
 Fire blight. (See *Erwinia amylovora*)
Fischerella (p.1860¹), n. spp., 2789, 8385
 Fish. (See also *Fisheries*; *Pisces*; and especially under common and scientific names of fishes.)
 ability to evade capture, bass, 16276
 activity, periodic changes in, rock bass and common sucker, 14419
 age, growth and feeding habits of whitefish, 14423
 age and growth of red-eared sunfish, 5408
 apodal, leptocephalous stage in, 8805
 for aquaria, descr. of suitable spp. and strains, 12471
 artificial stocking of streams, trout, 14407, 14410
 ash, comp. of Australian, 9168
 bacterial flora of normal, 4695

Fish (continued)
 behavior of American salmon planted in Bay of Fundy, 158
 biological effects of crowding, 9000
 as biological test-objects, 7793
 biology of pilchard, 148
 blood, CO₂ transport by, dogfish, 3629
 pH and alkali reserve, CO₂ tension of water as affecting, 370
 pH, CO₂ tension and Hb of fresh water, 7371
 O₂ transport, 12643
 blood cells, origin, development and function in marine teleosts, 16962
 body measurements, weights and scale studies, dog salmon, 7237
 body temp., detn., 231
 bony, diencephalon, anatomy, 7946
 internal ear, structure, 661
 pancreas, colloid in, 11411
 branchial epithelium, permeability to cetylquinoineum, 9082
 canned, firmness measured by penetrometer, 6259
 capture by coastal nets and by angling, tagging expts., salmon, 12626
 Characinid, monograph, 3380
 chem. comp. of Bengal, 10956
 seasonal variation, 10036
 chromatophores in relation to genetic and specific distinction, 12550
 cichlid, oral breeding in, development, 5154
 conservation, 14430
 in control of malaria, India, 15951
 conversion of carotene to vit. A₂ by, 11005
 Cu in blood and tissues, salmon, bass, carp, 12827, 12829
 creel census on Fife Lake, Michigan, 14408
 in Wisconsin lakes, 14409
 culture, in Lake Constance, 12623
 rearing of salmon from freshly fertilized eggs, apparatus for, 16280
 of trout in Ceylon, 12624
 Cyprinoid, classification, 1638
 melanophore response vs. light intensity, 430
 dermis, non-vascular connective tissue, structure in tuna and mackerel, 4345
 destruction of young prawn, *Pandalus*, 1874
 development, of *Oryzias*, dinitrophenol as affecting, 9774
 rhythmic movement of egg during, 15060, 15065
 digestive tract of carp, hist., 11425
 diseases, epidemic due to *Proteus vulgaris*, 15375
 gastro-intestinal disorder, 2711
Pseudomonas punctata infection and agglutinin formation, 8165
Salmonella infection, 15375
 sestonosis, 6254
 swim bladder inflammation, due to *Pseudomonas* and *Leuciscus*, 623
 treatment in ponds and hatcheries, 15361
 ulcer, 15891
 virus, 959, 11629
 ear, labyrinth, function and anatomy, 9457
 structure in Mormyridae, 15001
 eggs, permeability to salts, 10844
 eggs and larvae, dist. and survival, currents as affecting, haddock, 5410
 electrical polarity in, 12643
 embryonic heart, Na azide as affecting, 12643
 enterochromaffine and argentophile cells, dist., 9715
 fat, changes in cold-stored, 10032
 chem. comp., 10052
 in tissues, detn., 5412
 fat-necrosis of pancreas in, 2711
 flat, color changes in, 14662
 flicker response contours in genetically related spp., 7632
 flying, of Atlantic Ocean, monograph, 3374
 as food, of Australian coast, 12631
 consumption in Australia, 9168
 in human nutrition, 3660
 food for, detn. in streams, 14416
 fertilizers as affecting, 16284
 haddock, 150
Pleuronectes, 155
 trout, 151, 5409, 16285

Fish (continued)
 food habits, of brook trout, stomach analysis, 7238
 of Montana grayling, 14414
 of pike, stomach analysis, 12618
 trout, 1868, 16279
 Forssman antigen in, 4515
 galvanotropism and oscillotaxis in, 3997
 game, management, 14415
 Salmonid, book, 7239
 survey, in small lakes, 145
 use of brush shelters in Michigan lakes, 9060
 game and food, production in lakes, methods, 14411
 glucose, urea and NaCl in blood and vitreous body, 12746
 grafts, antagonism between implant and host, 8044
 grayling, life history and breeding habits, Montana, 6953
 growth, in Baltic, 1857
 of buffalo-fish in Wisconsin, 9053
 of cod, 1870, 5404
 detn., internal and external factors, method, 1860
 diversity in, 3528
 of flounder and dab, 1876
 of haddock, 1858
 of herring, 1861, 1875
 of plaice, 1864, 1865, 1871
 post larval, 6989
 southern North Sea, 1859
 of trout, underfeeding as affecting, 16466
 growth and food habits of herring in Clyde, 12629
 of Gulf of Maine, survey, 12620
 hemolysins of normal sera, constitution, 6082
 homing tendency and age at maturity of pink salmon, 10811
 hybrid, melanotic neoplasms, genesis, 16854
 as influenced by:
 insulin, 2288
 nicotine, 9565
 thyroxine and adrenalin, 2301
 lactoflavin in eye, 2217
 of Lake Okanagan, British Columbia, 5400
 larval distr. of lemon sole, 152
 leptocephalous stage, effect on phylogenetic status, 8805
 liver, hemoglobin producing factors in, 9267
 liver oils, cyclized vit. A in, 9220
 emulsions, vit. D in, 12861
 I value of unsaponifiable matter, 301
 lymphatics in, fat absorption and, 16559
 marine, *Anacampthorix intestinalis* from, 1057
 blood O₂ combining power, CO₂ and hemolysis as affecting, 10930
 intestinal parasitic protophyte in, 2766
 invading fresh water, 3381
 nematodes in, 10496
 reactions to temp. gradients, 3933
 white spot disease, 15385
 metabolism and movement, numbers as affecting, 434
 migration, through Panama Canal, 16051
 of pilchards on Pacific coast of N. A., 9062
 of salmon, along Scottish coast, 3532
 tagging expts., 153, 159
 1863, 3533, 7241
 9057, 9058, 10812
 12627, 14405, 14420
 vit. A and, 11006
 mortality of young sock-eye salmon, 5403
 muscle, decomposition of haddock, temp. as affecting, 2721
 electrometric titration, 10040
 fibers, changes under influence of parasite, *Cottus*, 11428
 regeneration of somatic, *Cottus*, 11376
 trimethylamine oxide in, bacterial reduction, 11774
 myelencephalic sympathetic center in, 14659
 nitrogenous extractives in, 9174
 oils. (See also *Cod liver oil*)
 vitamins in Pacific, 10996
 vit. A in, 314, 11000
 11001, 11002, 11006
 olfactory organs, mode of action, 2196
 operculum, defects in salmon, 764
 evolution, 8807
 O₂ threshold for, 5411
 O₂ utilization, CO₂ as affecting, 12643

SUBJECT INDEX

Fish-Flounder

Fish (continued)

parasites, acanthocephalan, 10549
 Florida, 15948
 trematodes from gills, 6801
 parasite relationships, Wisconsin, 8687
 picking, methods, 10053
 pituitary, epithelial components in
 teleosts, 16988
 evolution, dipnoi, 5899
 planting by plane, 16282
 poisons, derris as, 12619, 17390
 from plants, Assam, 12223
 of Sudan, 1525
 poisoning by, causes, 10053
 populations, abundance of sardines, fac-
 tors affecting, 9050
 age classes of herring in North Sea,
 of salmon, 9054, 9056
 analysis, Michigan, 5401
 conc. of herring in relation to food,
 3530
 fluctuations of herring and haddock
 in North Sea, 141
 of herring, 157
 in Michigan lakes, 9051
 Nova Scotia, 10814
 of salmon, control of fish eating birds
 as affecting, 12632
 size and age analysis, Scotland,
 tagging expts., 9059
 of trout, 141
 year classes of cod, 1872
 of dab in Baltic, 5405
 growth and sex ratio, whitefish,
 9061
 of herring, 145
 yield of Wisconsin lakes, 7236
 predators, control, 14413
 production, chemistry of impounded
 waters and, 14417
 initial feeding time of trout and
 grayling, 12621
 in lakes, methods, 14412
 in natural waters, 5397
 in relation to plankton production,
 16283
 products, proteins in, nutritive value,
 2011
 propagation of bass in streams of Poto-
 mac watershed, 14421
 of sockeye salmon, efficiency, 5402
 reflexes, conditioned, 11121
 locomotor, 2225
 regeneration of post anal body, trout
 larvae, 9672
 after wounding in carp, 9675
 respiratory tolerance, 12643
 retina, pigments in, 13060
 visual elements and pigment cells,
 13314
 roe, food poisoning by *Actinomyces*-like
 organism from, 13869
 salt-curing, mechanism, 10056
Saprolegnia parasitica host range in,
 11755
 scales, annulus formation in, *Notropis*,
 18044
 cycloid vs. ctenoid, criteria, 18045
 growth in relation to body growth,
 1869
 melanophores in, responses, 14663
 order of appearance in speckled
 trout, 10806
 seasonal abundance, plankton and,
 10813
 segregation of migrant and residual
 groups of anadromous salmon,
 factors in, 5406
 selective action of drift nets on, 12625
 sense organs, 3391
 serological vs. morphological classifica-
 tion, 4515
 shore, of Hawaii, 8815
 silurid, desc. of rare and n. spp., 8809
 smoke-cured, freezing and cold storage,
 10033
 snake, melanophore innervation, 9392
 spawning, area of *Clupea sprattus*, 1862
 early and late periods in codfish,
 3531
 induced by pituitary extracts in
 teleosts, 5895
 spinal cord, rhythmic activity, nervous
 function-structure, 11149
 spoilage, electrometric titration, 10040
 in ice storage, 10055
 trimethylamine oxide in muscles,
 11758, 11774
 squamation of *Boleosoma*, 8817
 of *Poecilichthys*, 8817
 of streams of Indian Tibet and Kash-
 mir, ecology, 7223

Fish (continued)

thyroid development in Atlantic salmon,
 17039
 thyroid feeding, effect on growth and
 differentiation, *Platycoelus*,
 12956
 tolerance for sudden changes in O₂
 tension, 10810
 tone appreciation, 14698
 toxicity of saponin to, 14832
 tropical spp. in aquaria, scientific
 names, 12423
 tumors, melanotic, hist., 582
 two headed trout, 15086
 vitamins in liver and roe, preservation
 as affecting, 5550
 in skin and scales, 16502
 vits. A and A₂ in, distr., 11000, 11001
 water retention in, pituitrin as affect-
 ing, 11048
 weight, trematode infection as affect-
 ing, 1556
 yield of Wisconsin lakes, 7235
 Fisher, attacking porcupine, New York,
 5240
 Fisheries. (See also *Fish*; and especially
 under important food fishes, e.g.,
Cod, *Salmon*, etc.)
 apparatus for rearing salmon, 16280
 current methods and management mea-
 sures, critique, 12623
 game fish management, program, 14415
 hatcheries, club-operated, Indiana,
 16278
 control of fish predators, 14413
 disease treatment in, 15361
 International Passamaquoddy investi-
 gations, 3530
 of Micronesia, 6972
 of New South Wales, review, 12631
 of Norway, 156
 periodicals, Research Board of Canada,
 Bulletin, 5277
 salmon, of Swiftsure Bank, Puget
 Sound, and Fraser River, 1873
 selective action of drift nets on
 Cornish fish, 12625
 of Tennessee Valley authority, progress
 report, 16277
 trout planting in streams, methods and
 problems, 10809
 value of growth studies, 3528
 Fishing, for sport, book, 12469
 Fission. (See *Cell division*.)
 Fissipedia (Mammalia), p.1883¹
Fissistiga (p.1865³), n. spp., 15505
Fissurellidae (Mollusca), p.1872¹
 Fistula, arteriovenous, intracranial pres-
 sure in, 16407
 Eck, liver function after, dog, 358
Fittonia, photosynthesis in, 17709
Fitzroya (p.1864³), in Argentina, 15484
 Fixation. (See also *Impregnation*; *Micro-*
scopical technique.)
 of extended stalks, Vorticellidae, 10520
 of materials by non-aqueous solns.,
 tissue changes in, 9712
 Fixative(s). (See *Fixation*; *Microscopical*
technique; *Preservatives*.)
Flabellula (p.1868²) *mitra*, vacuoles, origin
 and function, 3261
 Flacoutiaceae (Dicotyledones), p.1866³
 Flagellates acclimatization to osmotic
 pressures of media, 7253
 flagellum structure in, 1586
 hypermastigote, morph. and mitosis,
 10515
 intestinal, in chicks, cecectomy as af-
 fecting, 17909
 plant-like, nutrition, 12281
 polymastigote, from termite, 10516
 trichomonad, in facial lesions of pig,
 1554
 Flagellum(a). (See also *Cilium(a)*.)
 bacterial, antigens, in *Listerella* strains,
 4716
 of *Fusiformis dentium*, demonstration
 technic, 15418
 staining method, 17469
 staining as routine test, 2753
 of flagellates and algae, structure, 1586
 stain technic, 11668
Flammula (p.1862²), tax., 2801, 8404
 FLATALOIDES (Hom.) (p.1875³), n. sp.,
 8785
 Flavacid, in gonorrhea, 4574
 Flavin(s). (See also specific flavins, e.g.,
Acriflavin; and *Enzymes*; *Pigments*;
Vitamins.)
 chem., 5551
 effect on *Rhizobium* growth, 8351
 from *Eremothecium ashbyi*, 8091
 in Indian foods, 5567

Flavin (continued)

lacto-, deficiency, wt. of spleen in, rat,
 5564
 effect on:
 artificial fever, 13156
 Ba-avitaminoses, rats, 5845
 endocrine glands, 9809, 14951
 reduction of oxidation-reduction
 indicators, 16331
 tumors and embryonal tissues,
 13282
 in fish eyes, light and dark adapted,
 2217
 in organs, 12848
 ribo-, as bacterial growth factor, 17474
 deficiency, in canine blacktongue,
 3726
 in chicks, histopath., 324
 in dog, 3729
 effects, 4263
 in rat, 9226
 therapy with riboflavin, 14949
 vascularization of cornea in, 2059
 effect on:
 body fat, rat, 3724
 cataractogenic action of galactose,
 2065
 cozymase, 5841
 curled toe paralysis in chicks, 9234
 gastro-intestinal motility, 11029
 neuromalacia, chickens, 650
 renal diabetes, 529
 in mandioca and sweet potato, 9224
 in meat, 9225
 in milk products, 8082
 phosphorylation by intestinal mucus
 extract, 2101
 requirement of pig, 11010
 tubercle bacillus producing, isolation
 and detn., 2750
Flavobacterium brunneum, effect on endo-
 mixis, *Paramecium*, 12230
 Flavones, cardiac action, 4124
 -free diet, production, 312
 Flavoprotein, from heart muscle, 14780
 Flax. (See also *Linseed*; *Linum*.)
 bud initiation, indole-acetic acid as
 affecting, 3061
 bud malformation, due to thrips,
 Netherlands, 3181
 culture and industry, Germany, book,
 6489
 improvement, Morocco, 2950
 industry and history, Uruguay, 13795
 seed maturity, effect on drying capacity
 of linseed oil, 10198
 Thrips *lini* on, control and injury by
 derris, 14119
 Flea(s). (See also under genera, e.g.,
Xenopsylla.)
 from birds and mammals, Australia,
 6706
 on foxes, control, 6704
 rat, as vectors of typhus, 10023
 survey in relation to plague, in China,
 11718
 on varying hare, Alaska, 1564
 as vectors, of *Pasteurella pestis*, 11689
 of plague, 1004, 8290, 13637, 13660
 of tularemia, 4681
 Flea-bettle, control by Bordeaux, S and
 pyrethrum, potato, 12197
 Fleeces. (See *Wool*.)
 Flicker, *Haemoproetus* incidence in, 17901
 Flies. (See *Fly*.)
 Flight, frequency of wing vibration in,
 humming birds, 14303
 movements, *Drosophila*, 8762
 Flocculation. (See also *Agglutination*.)
 reaction, Forssman antigen and anti-
 body demonstrated by, 809
 in malaria diagnosis, technic, 6753
 tests. (See under specific diseases and
 tests.)
 Flood(s), control, relation to mosquito
 control, 10434
 effect on fauna of marine harbor,
 California, 12628
 on mammalian populations, 3495
 tolerance of fir and pine trees, 9021
 Flood fevers, Japanese. (See *Tsutsuga-*
mushi disease.)
 Flora(s). (See also *Vegetation*; and espe-
 cially the *Geographic Index*.)
 floristics, review of early work, 4799
 Floriculture. (See also *Bulbs*.)
 book, 6516
 greenhouse, with gravel and subirriga-
 tion, 11981
Florida c. caerulea, *Giardia* in, 6773
 Flouideae (Algae), p.1860⁴
 Flounder, growth rate in southern Baltic,
 1867
 host for trematode, n. sp., 5109

- Flour. (See also *Bread; Cereals; Grain; Wheat.*)
 as antioxidant in dairy products, 17090
 beetle movement in, rate, 1503
 solvation of colloids in, from winter vs. spring wheats, 2943
 Flour beetle, confused. (See *Tribolium confusum*.)
 Flour moth, Mediterranean. (See *Ephestia kuehniella*.)
Flourensina (p.1868²), f.n. spp. (K), 15978
 Flower(s). (See also *Anthesis; Bud; Inflorescence; Pollination; Sterility*; etc., also under parts of flower, e.g., *Androecium, Carpel, Gynoecium, Pistil, Stamen*.)
 anatomy, of Aurantioidae, 4814
 of avocado, 11927
 in *Corydalis*, 10170
 light and N as affecting, tomato, 6514
 of *Phaedranassa*, 4772
 review, 11931
 anatomy and embryogeny in *Artemisia*, 4808
 anatomy and phylogeny, comp., 2905
 anomalies, analysis of phyllody and virescence, 15522
 anthocyanins in, survey, 1404
 appearance, effect on phloem anatomy, 10172
 attractiveness for bumblebees, 12574
 bud, development and formation, in pear, winter oil spray as affecting, 3178
 formation, factors affecting, 2988
 chromosome and ligulate flower number correlated in *Chrysanthemum*, 1134
 color, inheritance, alfalfa, 8938
 somatic segregation, *Nicotiana, Phaseolus*, 1755
 culture. (See *Floriculture*.)
 development in *Artemisia*, 4808
 monograph, 11918
 in *Myrmecodia*, 2916
 and relationship in *Styrax*, 4805
 as food for sphinx moth adults, 5030
 formation, in gladiolus, relation to corm characters, 8498
 rôle of hormones in, 15718
 in wheat, C/N ratio as affecting, 6804
 genetics of morphology and function, *Vitis*, 4758
 hormones producing, spinach, 15741
 ovary, in *Boraginaceae*, 2910
 perfect, in *Buchloe dactyloides*, 1191
 petals, origin and structure, *Lychnis*, 13779
 phyllody in *Crotalaria*, 4804
 phylogeny of angiosperm and, 11919
 sexual dimorphism in *Carax*, 6448
 Flowering. (See *Anthesis; Flower; Phenology; Photoperiodism*.)
 Fluid, apparatus for constant injection, 12648
 elasticity, 3618
 inj. of small vol., method, 9182
 osmotic pressure detn., 7291
 Fluke(s). (See also *Trematoda*; under genera, e.g., *Fasciola*.)
 of amphibia, chapter, 10498
 cecal, of poultry, snail as intermediate host, Hawaii, 14157
 in centrarchid fish, Florida, 15948
 lancet, path of infection, exptl. studies, 14188
 liver, distr., snail population as affecting, 12261
 longevity, in goat, 6748
 in oviduct of hens, dragonfly as vector, 12258
 Fluorescein, dichloro-, as indicator for salt estimation in butter, 8086
 path of movement, in bean, 17718
 in psoriasis therapy, 17277
 Fluorescence-microscope, tubercle bacillus diagnosis by, 8225
 photometer studies on blood, 14489
 of vegetative products, use in identifying drug plants, 8555
 Fluorescent dyes. (See *Dyes, fluorescent*.)
 Fluoride(s), amt. in mollusc, 6824
 effect on:
 cholinesterase, 14661
 dental caries, 2012
 mold metabolism, 11766
 oxidation of amines and amino acids, 206
 fixation by Ca phosphate, 16296
 poisoning, effect on bone, dog, 14746
 relation to mottled enamel, 13277
 sodium, effect on glycolysis of tumors, 13231
 on proteolysis of liver sections, 9091
 toxicity, 18178
 Mg and Na as affecting, 4152
 Fluorine. (See also *Cryolite*.)
 compounds, for grasshoppers, 12237
 as insecticide and injuring plants, 17863
 effect on metabolism, yeast, 4924
 in food and water, mottled enamel and, 9669
 in milk, aqueous and casein fraction, 15107
 poisoning, chronic effects, roentgen study, 5871
 effect on teeth, rat, 9170
 tests for spray residue, lima beans, 8640
 toxicity, cryolite vs., 14542
 of cryolite in water and in food, 14546
 -tyrosine, effect on cancer growth, 7843
 in water, removal by tricalcium phosphate, 2419
 Fluoroacetanilid, antipyretic activity, 14806
 Fluorocarbons, pharm., 12643
 Fluoroscopy, in tuberculosis detection, 17369
 Fluorosis, chronic endemic dental, as influenced by water supply, S. Dakota, 8287
 mottled teeth, in Krawang, 11866
 Fluosilicates, barium, as insecticides, 1529
 sodium, for greenhouse crickets, 14114
 Fly(ies). (See also *Diptera; Myiasis*; and under genera, e.g., *Musca*.)
 Amazon. (See *Metagonistylum minense*.)
 of bats, Berlin, 10443
 biting, repellants for, 10437
 chromonid, emergence, factors affecting, 9043
 Hessian. (See also *Phytophaga destructor*.)
 outbreak in Ohio, 1938, 3185
 horn, on cattle, control, 15915
 house, vibrio variability in, 6310
 hump backed, as parasite of bee brood, 15938, 15940
 larvae, cambium-mining, of broad-leaf spp., 3193
 in wound therapy, mechanism, 17256
 lesser bulb. (See *Eumerus* spp.)
 muscoid, factors in seasonal abundance, Texas, 5058
 mushroom, asthma due to hypersensitivity to, 6059
 narcissus. (See *Merodon equestris*.)
 onion, control, 17882
 robber. (See *Asilidae*.)
 sand, *Leishmania chagasi* in, 14156
 microfilaria in stomach, Crete, 3247
 solubility and properties of puparium forming hormone, 12932
 in stables, Dutch E. Indies, 3245
 and filariasis, 12262
 tsetse. (See also *Encephalitis, epidemic*; under genera, e.g., *Glossina*.)
 eradication, Africa, 15962
 history of trypanosomiasis and, S. Rhodesia, 14161
 trypanosomes in salivary glands, electric charge, 6718
 as vectors, of avian malaria, 6738
 of oriental sore, 13639
 Fodina (p.1868²) *delicata*, 12284
gracilis, morphology, 12284
 Focal infections. (See *Infections, focal*.)
 Fodder. (See under *Feeds*.)
 Foetus. (See *Fetus*.)
 Fog, particles, methods of measuring, 16237
Foleyella (p.1870²), sp., mosquitoes as in-term hosts, 6721, 10438
 n. spp. from *Rana*, 17959
chamaeleonis, from *Chamaeleon*, 14216
 Foliage. (See *Leaf*.)
 Foliar diagnosis, in corn, fertilizers as affecting, 8567
 N carriers as affecting, 17676
 use in testing effect of Ca on nutrition, 10293
 equilibrium between Ca, Mg and K, mathematical expression, 3058
 in potatoes, effect of soil on action of fertilizers, 13978
 relation to mineral absorption, 18977
 to supply of nutrients in soil, 4914
 Follicles. (See under organs, e.g., *Ovary; Thyroid gland*.)
 Folliculin. (See *Estrogens*.)
 Fomes (p.1862²), syn., 6853
 cultural characteristics, and key, 2799
geotropus, pecky rot of cypress due to, 6632
lignosus, physiologic specialization, 3169
noxius, stem rot of oil palm due to, 3114
pinicola, fruit body, morphogenesis and regeneration, 17493
 infertility in, 1079
 pathogenicity to forest trees, 12120
 Fomites. (See also *Carriers; Insects, as vectors; Vectors*; and under specific organisms and diseases.)
 paper as, 2680
 Fomitiporia (p.1862²), new species, 6853
 Food(s). (See also *Diet; Feeds; Nutrition; Vitamins*; and articles of food, as *Eggs, Fruits, Meats, Milk*, etc.)
 absorption. (See under *Digestive tract; Intestine*.)
 -allergens, atopic reagins in relation to botanical classification, 13513
 allergies to, causes and prevention, 11541
 gastroenterological relations, 2530
 anti-acrodynic properties, rat, 16526
 ascorbic acid in, bacteria as affecting, 17400
Aspergillus stellatus from, 10035
 book, 7403
 canned. (See *Canned foods; Canning*.)
 carbohydrates in, detn., 9126
 Chinese, comp., 8662
 mineral content, 16454
 vit. C in, 2070
Clostridium botulinum in, sources and control, 975
 cobalt in, 5518
 cooking. (See *Cooking*.)
 cycle, diatoms and copepods, review, 8040
 in lower Rhineland waters, 9046
 digestion. (See *Digestion*.)
 dispensaries, sanitary control, 8299
 dried milk as, in Nigeria, 11500
 effect on electrocardiogram, 13112
 on saliva, 7504
 energy yields of protein carbohydrate and fat, 14524
 fat deterioration in, review, 17404
 F in, mottled enamel and, 9669
 frozen vegetables, enzyme activity, 2726
 -handlers, amoebiasis spread by, 15335
E. histolytica incidence, Phila., therapy as affecting, 3682
 sanitary control, 8299
 Indian, biological value and digestibility, 16463
 chillies and coriander seeds, N. in, 5521
 Cu in, 10949
 flavine and vit. B₆ in, 5567
 iron in, availability, 5525
 Navajo, analysis, 16453
 phytin P in, 5524
 industries, dextrose in, and its health status, 11686
 inspection, history in U. S. A., 3889
 intake, body activity and, mice, 12772
 in children, 2008
 effect on growth and sex cycle, toad, 3957
 on hair growth and body size, rat, 7460
 as influenced by:
 ant. pituitary hormones, axolotl, 3888
 castration, 9367
 chronic CO asphyxia, rat, 2107
 vit. B, hyperthyroid rats, 3722
 insufficient, effect on growth, fish, 16466
 refeeding after, effects, rat, 3708
 iron in, availability, 307
 lead poisoning due to, review, 7925
 level, relation to rate of development and eye pigmentation, *Drosophila*, 3462
 of mammals, stomach analysis, 7038
 minerals and vitamins in, review, 9173
 minimum standards for calories, protein, fat and vit. C, 9175
 nutritive value, of Bengal fish, 10956
 of bread made with milk, 12775
 of cassava leaves, 271
 of Danish grain products, 264
 Java, 14519
 of sweet potato, man, 14517
 of wheat and rye sprouts in bread, 16451
 oxybenzoic acid and esters in, detn. and isolation, 8556
 paper containers for, sanitary condition, 13652

Food (continued)

- phytins in bread and pastries, . . . 3661
poisoning. (See also *Botulism*; *Paratyphoid*; etc.)
by *Actinomyces*-like organism from fish roe, . . . 13669
alpha-type streptococci in, . . . 9960
by anaerobic bacillus in sausage, . . . 13618
bacteria, meat inspection for, . . . 4682
etiology, . . . 2544
by fish, . . . 10053
by frozen-pack vegetables, . . . 10047
by hemolytic streptococci in hollandaise sauce, . . . 8292
ice cream causing epidemic, . . . 15352
by Limburger cheese, . . . 2652
mussels and clams in, . . . 11687
by *Staphylococcus aureus*, . . . 2651
preferences and demands, rat, . . . 3999
preferential response of ♂ rat vs. receptive ♀♀, . . . 2191
preservation. (See also *Canning*; *Refrigeration*; *Storage*.)
brines used in, film yeasts from, . . . 17405
chemical studies, . . . 2723
effect on:
vits. in fish roe and liver, . . . 5550
vit. C in spinach, . . . 14565
in tomatoes, . . . 7486
by esters, . . . 11769
frozen-pack, . . . 2732
-blueberries, microbial content and factors in, . . . 13674
fruits, microbial content, statistics on, . . . 13675
peas, vit. C in, . . . 2079
vegetables, enzyme activity, . . . 2736
microbial content statistics on, . . . 13675
micrococci in, . . . 10047
of fruits and vegetables, textbook, . . . 2722
heating rate vs. can size, . . . 2731
vit. C in fruit preserves, . . . 5571
proteins, from soybeans, . . . 1213
protein and non-protein N in, digestibility coefficient and, . . . 5523
for raccoons, . . . 4354
requirements, of *Calanus*, . . . 12606
of So. Indian children, . . . 7402
reserve, in bindweed roots, . . . 10176
tillage as affecting, . . . 10178
in quack grass, N as affecting, . . . 4830
of Rio de Janeiro population, . . . 13638
skin-testing with cooked vs. uncooked, . . . 15150
specific dynamic action. (See *Specific dynamic action*.)
storage. (See under *Storage*.)
supply, longevity and, *Daphnia*, . . . 431
tainting by volatile products of oranges, . . . 10042
in therapy of deficiency and metabolism diseases, . . . 11342
toxicity of cryolite in, . . . 14546
trace elements in, . . . 263
typhoid epidemic from carrier-contaminated, . . . 6212
in typhoid epidemiology, . . . 15349
utilization, protein in diet as affecting, rat, . . . 16446
vitamins in. (See under *Vitamins*.)
for wildlife, survey and factors controlling production, . . . 10816
Wisconsin, . . . 5420
Food habits, of barred owl, . . . 8536
of beetles in dead pine and oak stumps, . . . 10773
of bob-white, . . . 9066
of coyote, . . . 10826, 14426
of deer, . . . 7243, 10820
of ducks, . . . 9065, 16287
of fish, of fry and fingerling bass, 14421
of haddock, . . . 150
of Montana grayling, . . . 14414
of plaice, . . . 155
of trout, . . . 151, 7238
method of measuring, . . . 16279
of whitefish, . . . 14423
of young herring in Clyde, . . . 12629
of foxes, Minnesota, . . . 10822
of grouse, . . . 8539, 9067
of kingfisher nestlings, . . . 170
of muskrats, . . . 12634
of North American birds, . . . 9064
of partridge chicks, . . . 104
of *Phamatella* (bryozoan), . . . 9046
of red breasted merganser, . . . 5424
of Vermont bob-cats, . . . 10821
Food plant(s), of Brazil, *Cajanus* and *Canavalia* as, . . . 2935
and breeding plants of penbatomid bugs, . . . 12580

- cannas as, . . . 2930
of Fiji Islands, . . . 1241
of Indians, analyses, . . . 8516
of Maya Empire (Mexico), . . . 10294
propagation for waterfowl, . . . 9070
wild, of America, book, . . . 7071
of wild ducks, methods of transplantation and optimum habitat, 16287
of wild fowl, glossary, . . . 3587
Foot, congenital malformation, man, . . . 12559
tinea infections, mycoflora, . . . 13623
Foot-and-mouth disease, in Brazil, . . . 17288
in domestic vs. wild animals, . . . 11750
elementary bodies, . . . 6167
human infection, . . . 17296
immunization to, . . . 2605
premunition, by hemovaccination, 2600
prophylaxis, by convalescent-blood transfusion, . . . 8322
in Rhodesia, . . . 2717
serodiagnosis, by complement fixation in man, . . . 857
in Uganda, . . . 2718
vaccine, prep., . . . 15596
virus, immunizing value of Al(OH)₃ adsorbate, . . . 904
tissue culture negative, . . . 15578
virulence-raising substance in immune serum, . . . 951
Footprints. (See *Dermatoglyphics*.)
Forage plants. (See under *Crops*.)
Foramen, ovale. (See under *Heart*.)
Foraminifera (Protozoa), p. 1568²
† (K), France, . . . 15978
large, from Guam, . . . 10517
phylogeny, . . . 14198
† (K), Provence, . . . 17925
Forcing. (See also *Dormancy*; *Seed*; etc.; and under agents employed, as *Ethylene chlorhydrin*.)
of Dutch irises, temp. as affecting, . . . 10217
of ornamentals, use of light in, . . . 1225
of rhubarb, factors affecting, . . . 1264
Forest(s). (See also *Deforestation*; *Forestry*; *Reforestation*; *Shelterbelts*; *Silviculture*; *Trees*; *Woodlots*; and under forest species.)
of Abyssinia, . . . 12003
areas, erosion control, . . . 9037
beech, of Carpathians, altitudinal distr., . . . 7201
in Denmark, . . . 5383
light distr. in, . . . 3489
of Belgium, . . . 3026, 13933
black, ecology, . . . 133
of central France, . . . 15628
of Chile, . . . 12008
conservation, books, . . . 14317, 15581
deciduous, . . . 12592
diseases, in Connecticut, . . . 3164
entomology, methods and concepts, . . . 3199
recent progress in, . . . 1511
of Ethiopia, . . . 15624
Eucalyptus, of Australia, ecology, . . . 12586
fires, in Australia, . . . 17659
control by protection plantings, 4898
in Czechoslovakia, . . . 1301
effect on ground vegetation, Norway, . . . 15643
on soil temp., . . . 15646
by lightning, in relation to subterranean water shifts, . . . 14389
relation to stand composition of longleaf pine, . . . 7195
succession after, . . . 13925
firebreaks, chemicals for clearing, . . . 15649
and forestry, in Austria, . . . 1287, 10274
in Belgium, . . . 10244
in Finland, . . . 12002
in Latvia, . . . 1304, 13924, 13940
in Malaya, . . . 4883
in New Brunswick, . . . 13947
in Prussia, . . . 3024
in South Africa, . . . 17651
in Switzerland, . . . 4885
fungi, New Zealand, . . . 1417
-grassland, tension zone in Nilgiris, India, factors affecting, . . . 9009
growth in Finland, . . . 15650, 15659
second, in Brazil, . . . 10246
in Switzerland, . . . 17644
hardwood, thinning for browse, . . . 14431
of Hungary, . . . 7202, 17652
insects, harmful vs. beneficial, resemblance, . . . 10430
insect pests, book, . . . 15911
control, of gypsy moth by mixed stands, . . . 8654
progress, . . . 1511
in Sweden, . . . 1512

Forest (continued)

- insect pests (continued)
damage by *Dendroctonus* and *Diprion*, Quebec, . . . 12207
survey, . . . 10428
insect populations, economic importance, . . . 10768
interglacial, of Alaska, . . . 7191
of Italy, . . . 8529, 8531, 8532, 8534
of Kelantan (Malaya), . . . 15636
light intensity in, . . . 8523
litter, decomposition, . . . 8535
by soil microfauna, . . . 1290
in Swedish forests, . . . 7203
of Lower Silesia (Germany), . . . 1303
management, in Germany, . . . 8539
in hardwood forests of Alsace, 13961
in India, . . . 12004
for landscape effect, . . . 8522
in Manitoba, . . . 13923
with "méthode du contrôle," . . . 15676
selection system, . . . 15647
by selective cutting, . . . 15648
in Sweden, . . . 8527, 8549
in Switzerland, . . . 4882
measurement of evaporation rate and light penetration in, . . . 10763
mensuration, construction of yield tables, . . . 15675
detn. of stand volume, . . . 1298
growth and yield of uneven-aged stands, Finland, . . . 15650
planimeter method for tree volume, . . . 13926
relation of stock- to crown-density, . . . 1288
sampling error in surveys, . . . 1291
site index and stand origin, . . . 13927
volume, of *Pinus resinosa*, . . . 3021
of *Shorea tectamariana*, . . . 1294
of standing timber, . . . 4899
table for *Acacia decurrens*, . . . 13934
yields, of East Indian and European trees, . . . 3020
of Mexico (Chihuahua), . . . 15679
of Morocco, . . . 7204
nurseries, for conifers, soil-fertility standards, . . . 4901
diseases, . . . 15890
nursery practice in Netherlands, 4881
in South Africa, . . . 3025
use of manure in, . . . 15670
of N fertilizers, . . . 1297
oak, types and ground flora, Denmark, . . . 10787
oak-hickory and maple-linden, environ. factors as affecting, Iowa, . . . 7217
oak-hornbeam of Europe, . . . 15888
pathology, survey, N. America, . . . 15888
photosynthesis in, amount and factors affecting, . . . 4931
plantations, cultural treatment, . . . 12007
effect of lime on, . . . 10243
mixed, Bengal, . . . 10258
planting. (See also *Afforestation*.)
effect of root position on tree growth, . . . 3023
in high mountains, . . . 15641
in Philippines, . . . 1293
postglacial, of central New York, 7205
problems, of former German Africa, . . . 15663
products, of S. Africa, . . . 4892
of southeastern Texas, . . . 15632
pruning. (See under *Silviculture*.)
rain, of Ceylon, . . . 9008
floristic composition, Nigeria, . . . 16263
New South Wales, . . . 3502
rainfall as affecting leaf anatomy, 4803
regeneration, comp. and structure of stands, . . . 8547
of hardwoods, Malaya, . . . 13957
Sweden, . . . 7203
by "taungya" method, India, 10271
research, statistical methods in, . . . 8544
in Switzerland, . . . 17663
resources, of Louisiana, . . . 3037
of Sardinia, . . . 13922
seed production, Finland, . . . 15644
selection form, composition and structure, . . . 10279
photosynthesis in, . . . 15640
sites, theory and classification, . . . 10238
soils. (See also *Soils*.)
chemical effect of slash-burning and cropping, . . . 1296
classification in Finland, . . . 15621
distr. of acidity in, Finland, . . . 15622
effect of improvement measures on bacterial flora, . . . 15635
improvement in spruce, . . . 15627
methods of improving, . . . 15627
water content, factors affecting long leaf pine, . . . 10250

- Forest (continued)
 spruce, of French Jura, analysis, 125
 spruce-fir, stratal animal societies, ecology, 8998
 standing, protection from *Lyctus* attack by depletion of starch, 3197
 succession, (See under Succession.)
 survey, of Italy, 10235
 methods in Germany, 4895
 of Switzerland, changes in composition, 15664
 timber line, Roumania, 3503
 transplanting beneficial ants, methods, 10422
 trees, climatic races, Norway, 15642
 damage by New England hurricane, 1938, 12166
 hardwood invasion of longleaf pine, 7195
Nectria canker in, infection channels, 10369
 pathogenicity of *Fomes pinicola*, 12120
 prevention of wood rot after storm damage, 12168
 reproduction, factors, on Indiana farm land, 13964
 of western N. America, 3019
 tropical, insect pests and balance of nature in, 8977
 rain, 9008
 as source of raw materials, 13939
 tupelo gum, phytosociology, 12595
 of Turkey, 1307
 types on glacial till plain, Indiana, 12592
 vegetation, of Italy (Lombardy), 8533
 in Java, 15680
 of western Germany, 3031
 virgin, structure, 15683
 warm temperate rain, ecology, Tan-ganyika, 127
 Forestry. (See also Afforestation; Forests; Reforestation; Silviculture; Wood-
 lot.)
 in British Honduras, annual report (1937), 3022
 in Czechoslovakia, 10276
 in Finland, history, 4891, 6534
 in northwestern Germany, 3036
 periodicals, Journal of the South African Forestry Assn. established, 1688
 new Italian, 8897
 popular handbook, for France, 3027
 in Scotland, 13931
 state control, book, 13963
 textbook, 13960
 use of fertilizers in, 15669
 Form. (See Morphogenesis.)
 Formaldehyde, detn. and change during diphtheria toxoid formation, 16357
 in diphtheria toxoid, detection by dimedon method, 13506
 effect on:
 activity of ant. pituitary extracts, 5627
 blood P, 16424
 blood sugar and chloride, 2332
 gonado- and thyrotropic activity of pituitary, 16619
 liver lipids, 12886
 snake venom, 3636
 formal-gel reaction, in infectious anemia of horses, 13816
 in rheumatic carditis, 7884
 inhibition of precipitation of sera with polysaccharide by, pH as affecting, 848
 rôle in detn. of N in body fluids, 5484
 serum proteins treated with, specificity, 17155
 sulfoxalate, in Hg poisoning, 16761
 test, for lymphogranuloma inguinale, 890
 vapors, disinfecting power and technic, 15923
 Formalin. (See Formaldehyde.)
 Formamide, polysaccharide extraction from streptococci by, 9988
 Formic acid, hydrogen production from, by *Escherichia coli*, 17463
 Formica (p.1878*), n. sp., 3350
rufa, artificial propagation of, 10422
 L. H. morph., 10422
 predator on *Lygaeonematus*, 5051
 use in control of forest insects, 8521
uralensis, in East Baltic region, 18026
 Formicoides (Hym.), p.1878* (See also Ants.)
 Formolgel reaction, blood protein detn. by, 11855
 FORMOSOLVA (Dipt.) (p.1877*) kerteszi, 6901
 FORMOSOLVA (Dipt.) (p.1877*), subg. of *Solva*, 6901
 Fornaz (p.1876*) coxalis, 6873
 Forssman antibodies. (See Antibodies, Forssman.)
 Forssman antigens. (See Antigens, Forssman.)
 Forti, Achille, biography, 1680
 Fortunella margarita, water damage to fruit of, 6662
 Fossaria parva, host for n. Cercaria, 12291
 Fossil(s). (See under taxonomic names; Paleontology; for material indexed geographically see Geographic Index, p.1884; for material indexed by geological periods, see Geological Index, p.1893.)
 calcareous incrustations simulating, 3233
 plants, in ground sloth dung, Arizona, 7048
 type specimens, of Colorado, 1538
 Foulbrood. (See under Honeybee.)
 European. (See Bacillus pluton.)
 Fouling organisms in Hawaii, ecology, 10793
 Fougiera (p.1867*), n. spp., 11886
 Fouquieriaceae (Dicotyledones), p.1867
 Fournau 883. (See Benzodioxan diethyl-aminomethyl-.)
 Fournau 933. (See Benzodioxan, piperidomethyl-.)
 Fovea. (See under Eye, retina.)
 Fowl. (See Domestic fowl; Poultry; and under common and scientific names of kinds of fowls, e.g., Gallus domesticus, Geese, etc.)
 Fowl-cholera. (See also Pasteurella avicola.)
 carrier detection and control, stained-antigen rapid whole-blood test for, 6252
 in ducks, immunization by bacterin, 6121
 vaccine for, prep., 13461
 Fowl coryza, virus, nature and culture, 4598
 Fowl-leucosis. (See Leucosis.)
 Fowl-pest. (See Fowl-plague.)
 Fowl-plague, virus, isolation and culture on chick embryos, 9957
 properties of mouse-adapted strains, 13561
 spread in nerves and affinity for gonads, 9947
 tissue culture, 4579
 Fowl-pox. (See Epithelioma contagiosum.)
 Fowl-typhoid. (See also Epithelioma contagiosum; Salmonella gallinarum.)
 serodiagnosis by egg-yolk agglutination, 2603
 Fox. (See also Vulpes.)
 acetonemia and nervous disturbances in, vitamins and, 2692
 bile, comp., 9261
 distemper, inclusion bodies in, 6168
 rapid diagnosis by inclusion bodies, 11738
 encephalitis, comp. histopath. of canine distemper and, 6240
 epizootic, inclusion bodies in, 6168
 flea infestation, control, 6704
 mating and breeding habits, New York, 5420
 paralysis due to vit. B₁ deficiency in, 11737
 platinum coat color from silver fox mutation, 17115
 silver, bile comp., diet as affecting, 12895
 blood, respiratory transport properties, 10909
 enzootic encephalitis due to paratyphoid infection in, 4683
 Trichophyton infection to man from, 968
 Fragaria. (See also Strawberry.)
 Frambesia. (See also Treponema pertenue.)
 changes in cerebrospinal fluid, vs. syphilis, 9611
 general account, 11636
 juxta-articular nodules associated in, 981
 susceptibility to, tribal differences, 11576
 Francisella caucasica, in cattle, 1546
 Francis-Tillett skin test, for serum, antibody content in pneumococcus immunized vs. non-immunized, 15137
 Frankenia (p.1866*), n. spp., 11886
 Frankeniaceae (Dicotyledones), p.1866*
 Frankiniella (p.1875*) lycopersid, in South Australia, 3367
 tritici, injury to cotton, 10409
 FRASERULA (Fungi) (p.1862*) australiensis, on Cryptocarpa, 8407
 Frazinus (p.1866*). (See also Ash.)
 n. spp., 2828A, (N)17475
 in dung of ground sloth, 7048
 Phyllosticta viridis on, 15471
 spp., wood and petiole structure, 10145
 excoelior, silvical characteristics of, 11998
 Freezing. (See also Cold; Frost; Hardness; Temperature.)
 effect on:
 bacteria and protozoa, 4659
 transmission of carcinoma, mice, 4178
 tumors, 12889
 vit. C in apples, 9237
 fruit-juice conc. by, 1021
 of moss cells, relation of injury to water content, 1402
 of plant cells, relation between death and ice-water proportions, 1401
 of plants, mechanism of injury, 6609
 point. (See Osmotic pressure.)
 of potatoes, injury caused by, 8477
 preservation of neoplastic cells by, mice, 573
 Frei's disease. (See Lymphogranulomatosis inguinale.)
 Freidelin, from Bambusa culms, prep. and properties, 6533
 Frenula, tax., 16009
 Frequency. (See Curves.)
 Frequency curves and correlation, book, 7169
 Freund-Kaminer reaction, for carcinoma, chick embryo cells in, 9869
 Freycinetia (p.1864*), n. spp., 11868
 Freyella (p.1871*) mexicana, 10552
 Fringilla (p.1882*), sleep of, 8841
 coelebs, banding, 14296
 montifringilla, nesting and incubation, 7004
 Fringillaria (p.1882*), n. subspp., 7023
 Fringillidae (Aves), p.1882*
 FRISERIA (Lepidopt.) (p.1877*), 16040
 Fritillaria (p.1865*), n. spp., 6384
 Frog(s). (See also Amphibia; and under genera of Salientia (see p.1880*))
 amylase activity, temp. as affecting, 5601
 cerebellar and decussating medullary pathways, function, 14723
 clasping reflex, seasonal variation, 5676
 Cu in tissues, seasonal change, 12829
 Diploidiscus in, biology, 12252
 egg development, 15070
 pituitary extracts as affecting, 7543
 embryonic development, film, 8034
 O₂ consumption during, 866
 filaria, development in mosquitoes, 10483
 mosquitoes as intermediate hosts, 6721
 flukes, in ear, 12801
 in lung, chapter, 10498
 kidney, tumor, descr. and metastases, 2364
 manner of growth, 14894, 14895
 virus as cause, 593
 list of spp., W. Africa, 6979
 liver, cells, structure and excretion of fluorescent dyes, 4351
 Hb producing factors in, 8267
 nerve cell, nuclear size vs. physiological state, 11397
 nervous system, localization patterns in, 16977
 pickerel, ciliate parasite in intestine, 10527
 respiration, control, 9274
 sartorius muscle, regeneration, 14997
 skin, electric potentials, 180
 as influenced by:
 fluorescent dyes, 14442
 heavy water and temp., 3544
 iodoacetate, O₂ uptake and, 9078
 permeability, polarisation and resistance, 16300
 transplants into lymph spaces, migration of epidermal cells in relation to surface polarity, 11419
 spinal, conditioned reflex in, 11121
 tadpoles, assay of thyroid hormone on, 3932
 pars intermedia, infundibular lesions as affecting, 448
 water balance, and melanophore size, crustacean eye-stalk hormone as affecting, 12643
 post. pituitary extracts as affecting, 5611, 9282, 14609

- Frog hopper, on cacao, control,....14107
sugar cane, control,....14147
Frost. (See also *Freezing*; *Hardness*.)
damage to *Citrus* orchards, protection
against,....1265
to fruit trees, meteorological factors
affecting,....8492
to grassland vegetation, India, 9028
effect on sugar cane,....10184
penetration of soil, ground cover as af-
fecting,....14382
protecting orchards against, methods,
....13906
for orange,....15600
use of infra-red lamps in lemon, 8517
Frozen pack. (See *Food*, *preservation*,
frozen pack.)
Fructosan, metabolism in barley, minerals
as affecting,....8584
Fructose, in blood. (See under *Blood*,
sugar.)
detn. in presence of pentoses, method,
....17736
in sugar mixtures,....16386
effect on phosphate distr. in body fluids
and tissue,....10913
ingestion, high, effect on body wt. and
comp. rat.,....9193, 10983
lactic acid formation from, catalysis by
anions of weak acids,....9088
metabolism, study,....14533
 γ , stability and heat of activation of
its conversion to normal fruc-
tose,....14453
ultra-violet as affecting,....1380
in urine, hepatomegalia and, child, 9578
Fructus juniperi, diuretic action,....4168
Fruit(s) (edible). (See also *Fruits* (morpho-
logical); *Fruit trees*; *Horticulture*;
Pomology; *Ripening*; and especially
under kinds, e.g., *Apple*, *Citrus*,
Orange.)
absorption of fumigants by,....10337
buds. (See under *Buds*.)
carbohydrate fractions, detn.,....9126
CO₂ content, detn. and factors affecting,
....14014
color, inheritance, *Capsicum*,....12535
development in apples and pears, pol-
len source as affecting,....6526
diseases, in city markets,....15890
handbooks,....8633, 17848
dried, protective film on, pyrethrum oil,
....3192
ethylene evolved from, detn.,....17735
respiration and,....4943
fresh, bacterial pathogens of man in
viability,....4647
frozen-pack, microbial content, sta-
tistics,....13675
green, photosynthesis in,....4930
growth, kinetics, pineapple,....6592
retarding and promoting substances
in, *Helianthus* and *Avena*,
....13997
water as affecting, date palm, 13897
wounds as affecting,....12079
hist. of development in cherry,....15525
juices. (See also *Beverages*.)
conc. by freezing,....1021
pasteurization,....1020
vit. C oxidase in,....5576
microbiology in relation to products,
....8332
pectin from pulp, effect of sulphurous
acid on setting,....10227
preserves, vit. C in,....5571
products, commercial, textbook,....2722
production, temp. as affecting,....6506
respiration in, acetaldehyde as affect-
ing,....10323
measurement, methods compared,
....14018
of volatile products liberated dur-
ing,....8579
setting. (See also *Pollination*; *Repro-
duction*.)
in pears, factors affecting,....6523
stone, bacterial canker, infection con-
ditions and symptoms,....14056
mosaic diseases,....3121
Sclerotinia spp. on,....10343, 17749
subtropical, breeding and selection in
Fla., history,....8495
time of drop, related to number of
seed, apples,....13912
tropical latent fungus infections in,
....8599
storage and transport, book,....3009
variety trials, central U. S.,....15611
vit. C in, CO₂ as affecting,....1271
Indian,....8737
Texas,....6509
Fruit(s), (morphological). (See also *Car-
pel*; *Gynoeceum*; *Parthenocarp*; *Pis-
til*; *Seed*; and under the particu-
lar kinds of fruit, e.g., *Nut*.)
anatomy, of abscission, mango and avo-
cado,....6505
apple,....10230
of cucurbits, cell size-fruit size cor-
relations,....10171
development, *Olea*,....1172
hormone, distr. in, relation to partheno-
carpy,....10301
parthenocarpic, hormones as affecting,
....10300
pneumathode, in fruit of *Erythra*, 13781
Fruit fly, Mediterranean. (See also *Cera-
titis capitata*.)
mutations, fast neutrons as affecting,
....205
Natal. (See *Ceratitis* (*Pterandrus*) *rosa*.)
Fruit moth, Oriental. (See *Laspeyresia mo-
lestia* (= *Cydia m.*) (= *Grapholitha m.*.)
Fruit trees. (See also *Fruits*; *Horticulture*;
Orchards; *Pomology*; *Pruning*; and
especially under kinds, e.g., *Pear*.)
breeding, "incubator" technic,....3005
culture, Ceylon,....1261
in Michigan, relation to K in soil,
....2991
culture and statistics, Utah,....3012
disease control, in Illinois,....17832
in Quebec,....17836, 17839
frost damage, meteorological factors af-
fecting,....8492
fruit bud formation, factors affecting,
....2988
growth and fruit bud formation,....1254
Australia,....1226
Mg deficiency in, symptoms,....17808
mineral deficiency symptoms, Quebec,
....17803
parthenocarp and apogamy in,....11974
pollen viability, temp. and humidity as
affecting,....13890
size, relation to size at time of setting,
....17633
transpiration rate and drought resis-
tance, relation to leaf shape,
....13888
transplanting, methods and time for,
Ontario,....11995
wound healing, growth hormones as af-
fecting,....15709
Frullania (p.1863³), sex chromosomes in,
....47
FRUMENTA (Lepidopt.) (p.1877²), 16040
Fryer, J. C. F., portrait,....7075
Frying, fats for deep-fat, at high altitudes,
....10060
Fuadin, in kala azar chemotherapy,....822
Fucaceae (Algae), p.1860⁴
Fucellia fucorum, parasitized puparium of,
....8776
Fuchsia (p.1866³), n. spp., 2827A, 11887
Fuchsin paint, oriental sore therapy by,
....11581
Fucus (p.1860⁴), embedding and staining,
use of dioxan in,....16122
normal and abnormal germination,
....1068
polarity of eggs, pH as affecting,
....3078, 3098
serratus, experimental morphology, 2790
photosynthesis, rate, temp. and light
intensity as affecting,....1840
Fulgoridae (Homoptera), p.1875⁵
Fulica americana, feeding habits,....7027
Fuligo (p.1861¹) *septica*, reactions of
swarm cells, of, as affected by tem-
perature,....1085
Fulmarus (p.1881¹) *glacialis*, activity in
Arctic,....113
intermittent breeding,....18084
Fumago vagans, causing sooty mold of
sugarcane,....1429
Fumaria officinalis, alkaloids of, chemistry,
....12036
Fumaryl-glycidic acid, molds producing,
....17407
Fumes. (See also *Smoke*.)
ethylene amine, toxicity,....2421
Fumigant(s). (See also *Disinfectants*;
Fumigation; *Fungicides*; *Insecti-
cides*.)
absorption by fruits,....10337
cyanide as,....17860
 β , β -dichloroethyl ether, method for
greenhouses,....1501
for Japanese beetle larvae,....17887
ethylene oxide as,....8642
for granary beetle,....5047
for plague vectors and reservoirs, 1004
for sweet potato weevil,....12187
Fumigation. (See also *Fumigants*.)
of cheese storerooms for mites,....10420
for *Cimex lectularius*,....10461
cyanide, poisoning during,....4170
in rabbit control, Britain,....14433
of greenhouses with β , β -dichloroethyl
ether,....1501
of mushroom houses,....5043
with paradichlorobenzene, for control of
tobacco blue mold,....1455
for sweet potato weevil,....14115
of strawberry plants, time for,....13880
of tobacco, for control of blue mold,
....3151
of tobacco seedbeds with benzene, for
mildew control,....8630
vacuum, with HCN, for corn borer,
....10467
of wheat, effect on enzymes and quality,
....3190
Fundulus (p.1879³), biology,....10814
heart and eye implants,....8044
pituitary control of gonads,....9345
heteroclitus, color response to back-
grounds, temp. as affecting, 5678
development, analysis by mitotic
index,....5949
lymphocystis virus disease,....11629
 σ sex cycle, environment as affecting,
....12622, 12630
Fungi. (p.1861¹). (See also *Dermato-
phytes*; *Mildews*; *Molds*; *Mushrooms*;
Mycology; *Mycoses*.)
allergy to, specificity,....6091
attacking June-beetle larvae,....15906
in bovine abortion etiology,....15364
in cellulose decomp.,....11784
for corn borer control,....12229
culture, constant renewal of soln., 17849
method, *Spicaria* spp. on corn ear
worm pupae,....3205
permanent label for,....15884
toxicity, to germination and growth
of cabbage, tomato,....12142
culture collection,....1052
at Baarn (Holland),....1081
dermatophytic, guinea pig susceptibility,
....11647
destruction of nematode larvae by,
....14172
dissociation in,....9976
epiphytic, collodion film method of ex-
amination,....17850
from epiphytic sooty molds, culture
studies,....13733
evolution, by mutation and hybridiza-
tion,....12151
as food of snail,....4742
forest, of New Zealand,....1417
as source of food,....17654
fruit-body formation in *Pholiotia*, molds
as affecting,....8405
fruiting. (See also *Reproduction* (plant);
Spore, *fungus*.)
grassland, in relation to soil type, 5389
growth, carbon in media as affecting,
....11801
of colonies on different substrata, in-
terpretation,....17704
growth hormones as affecting, 12065
regulators for,....4714
substances for, review,....17458
in synthetic nutrient sols.,....17675
hyphal anastomoses, comparison to
chimaeras, and effect on species
characters,....2810
hypeogean, monograph of Tuberales,
....8390
in industries, book,....10059
inheritance, of lethal factors, *Sphacelo-
thea sorghi*,....3169
in *Sclerotium rolfsii*,....4963
in insect control (*Beauveria*),....8665
Poland,....8666
mold, in butter, factors affecting, 10064
disinfectants tested against, 17397
ethylene oxide- α , β -dicarboxylic acid
production by,....17407
iodoacetate and fluoride as affecting,
....11766
isolation and culture, molasses agar
for,....9979
of soils, auxin production by, 17435
tyrosine transformation to pig-
ments by,....17437
morphology, book,....6332
mycorrhizal, morph. and phyl.,....15438
narcotic, *Panecolus*,....13971
nematodes, arachnids and insects on,
bibl.,....8646
nematode-capturing, in control of root-
knot,....15874
in normal stools, incidence,....8252

- Fungi (continued)
- nutrition, effect of dextrose and thiamin on *Phycomyces*, 14008
- heavy metals, 10296
- pathogenic to man and higher animals. (See also *Blastomycosis*; *Dermatophytes*; *Dermatophytes*; *Mycosis*.)
- cantharides blister for detecting, 13625
- growth, factors affecting, 972
- identification and classification, 9977
- in sarcomatosis, 6205
- study, 15389
- survey in Argentina, 9981
- in California, 9982
- perithecium, in *Neurospora*, 2809
- 2810, 6336
- in petri dishes, photography, 7066
- photography, technic, 7060
- phylogeny of Basidiomycetes, 8402
- physiologic strains in. (See also under *Plant diseases, physiological specialization*.)
- poisonous and edible, Michigan, 4739
- population density in suspensions, detn., 6764
- ringworm, immunol. relations in laboratory animals, 6203
- sclerotia, of *Collybia*, 10110
- seed-borne, of cereals, pathogenicity, 3169
- seed-infesting, of rice, 10350
- of skin infections, stain technic, 8248
- of soil, classification, 13730
- effect on virulence of cereal rootrots, 17821
- factors affecting, 13686, 17431
- mold flora of British soils, 3388
- pathogenicity, factors affecting, 3140
- root infection by, review, 13730
- thermophilic actinomycetes, 4703
- spores. (See also under *Spores*.)
- incidence in air, 6046
- secondary forms, book, 13729
- symbiosis with *Myrica gale*, 12596
- thermogenesis, N as affecting, 12099
- thermophilic, in composts, 4703, 8350
- trichogyne in perithecial formation, *Neurospora*, 6336
- tuberculosis organism relation to, 2748
- tyrosinase from, 4948
- use in detn. of vit. B₁ in blood, 5492
- vit. O in, 11018
- wood-rotting, immersion as affecting, 5008
- relative humidity as affecting, 6387
- yeast, longevity, 6261
- yeastlike, isolated in oral cavities, 9703
- Fungicide(s). (See also *Dusting*; *Fumigants*; *Insecticides*; *Plant disease, control*; *Sprays*; *Spraying*.)
- aerial spray, concentrated, factors in, 17839
- ammonium chloroacetate as, 6684
- benzoic acid as, 6676
- benzol as, 6682
- Bordeaux oil emulsion as, 17845
- bromine as, 4668
- for control of rust fungi, 1464
- copper, adhesiveness, chemical and electrical detn., 3169
- compatibility with arsenicals and oils, 3169
- for control of wheat bunt, 1474
- insoluble spray compounds, 17838
- for vegetable crops, 8161
- relation of particle size and color to effectiveness, 10373
- in soil, effect on bacteria and crop plants, 15405
- on Cu in plants, 15405
- copper sulfate, for tree injection, 14089
- cuprous oxide as, 3152
- as rose spray, 3160
- for tomato blight control, 3169
- yellow form, 3169
- for disinfection of pea seed, 8626
- eradicant, paradichlorobenzol as, 6683
- handbook, 10378
- inorganic disinfectants, tests against molds, 17397
- with insecticide, for apple, Del., 12179
- copper-nicotine-bentonite as, 14149
- for lettuce seed treatment, 1475
- lime-sulphur, effect on apple yields, 3169
- mercury, injury to wheat seed, 1458
- need for international catalog, 17844
- phenothiazine as, 8169, 15871
- sodium lauryl sulphate as, 4048
- sulphur, particle size, 3169
- testing, sources of variability in, 3169
- statistical interpretation, 15882
- vegetable oils as, 3169
- volatile, effect on storage of sweet cherry, 6678
- methods of testing, 15877
- water as, against powdery mildews, 6688
- Fur(s), interstate shipments, regulations, 16286
- treatment with proteolytic enzymes of oats, 14461
- vit. B complex as affecting, rat, 12844
- Furan, industrial uses, 13842
- Fur-bearing animals. (See *Animals, fur-bearing*, and also specific animals, e.g., *Mink*.)
- Furunculosis, diets in relation to, fish, 5409
- heterogeneous antibodies in, 846
- orientalis. (See *Leishmaniasis, cutaneous*.)
- Fusarium* (p.1863), n. sp., 15453
- spp. associated with cereal diseases, in Manitoba, 3169
- on cereals, root growth and injuries as factor, 10348
- citrus root rot due to, 1482
- condia, light as affecting, 10321
- culture methods for identification, 17759
- diseases of cereals due to, in Gr. Britain, 8600
- Indian spp., 15458
- tolerance for seed disinfectants, 8626
- on tomatoes, control by soil treatment in greenhouses, 1245
- avenaceum, causing tulip leafspot, 15796
- bulbigenum*, on narcissus, control by soil disinfection, 3169
- v. *lycopersici*, on tomato, control, by soil disinfection, 3169
- resistance, 3169
- v. *niveum*, on watermelon, resistant, 3169
- caeruleum, on potato tubers, control, 8691
- cubense, on *Musa textilis*, associated with vascular disease, 4984
- culmorum, footrot of asparagus due to, 14050
- oats vars. resistant to, 1206
- pathogenicity, as affected by soil fungi, 17821
- root diseases of cereals due to, in Oregon, 14046
- lini, growth and metabolism, dibenzanthracene as affecting, 15727
- lycopersici*, resistance to, in John Baer tomato, 8625
- on tomato, culture extracts as affecting germination and growth, 12142
- resistance as affected by root knot, 17826
- martii* var. *phaseoli*, on beans, 3155
- moniliforme, relation to *Cephalosporium*, on sugarcane, 1427
- oysporum, causing rot of *Cereus*, 17756
- vasinfectum, on cotton, effect of soil moisture on virulence, 4996
- inoculation technique, 1481
- pathogenicity of different strains, 8169
- Fusicladium effusum*, on pecan, control by spraying, 1457
- robiniae, in forest tree nurseries, 15890
- Fusicoccum viticolum*, on grape, 15808
- Fusiformis*, from mouth, 17446
- dentium*, aerobic and anaerobic strains, 4715
- flagella demonstrated on, technic, 15418
- F. polymorphus* as variant, 15418
- nucleatus, flagella, demonstration technic, 15418
- polymorphus, as variant of *F. dentium*, 15418
- Fusobacterium nucleatum*. (See *Fusiformis nucleatus*.)
- plauti-vincentii. (See *Fusiformis dentium*.)
- polymorphum. (See *Fusiformis polymorphus*.)
- Fusoma* (p.1862), n. sp., 17487
- Fuso-spirochaetosis, oral, systemic reaction to, 11630
- Fustine, from wood of *Rhus succedanea*, chem., 15692
- Gaehtgens pallida reaction. (See also under *Syphilis*.)
- in leprosy sera, 8256
- reliability and comparisons, 9983
- GAGRELLOPSIS (Arach.) (p.1874), 14243
- Gahnia psittacorum*, *Scirrhia* on, 8407
- Gahrlepiea* (p.1874), spp. transf. to *Galeria*, 8314
- Gaidropsaridae (Pisces), p.1879⁴
- Gaisberg, Elisabeth von, biography, 7083
- Galachrysis nuchalis*, new tapeworm in, 15992
- Galactogen deposits in rabbits, 5543
- Galactophora* (p.1866), n. sp., 2867
- Galactopus* (p.1862), n. sp., 4737
- Galactose, cataractogenic action, riboflavin and thiamin as affecting, 2065
- excretion, histamine as affecting, man, 11244
- ingestion, exercise as affecting metabolism after, 277
- muscle permeability to, 10840
- relation to appearance of senile suture line in lens, rat, 7642
- Galago mala*, eye structure, 11433
- Galax aphylla*, chromosomes and phylogeny, 8905
- Galeidae (Elasmobranchii), p.1879¹
- Galeopsis* (p.1867), sterility and chromosome pairing in intraspecific hybrids, 12507
- Galeropsis* (p.1862), affinities, 15462
- Galerucella* (p.1876) *luteola*. (See also *Elm leaf beetle*, (= *G. xanthomelaena*.)
- xanthomelaena*, in Utah, 10433
- Galesaurus* (p.1880) *planiceps*, skull, anatomy, 665
- Galium* (p.1867), n. sp., 8444
- aparine, *Leptosphaeria* on, 8408
- trifidum, in Poland, 17550
- Gall(s). (See also *Crown gall*; *Intumescences*; *Legume nodules*; *Legume nodule bacteria*; *Root, nodules*.)
- The material indexed here concerns plant galls produced by insects (chiefly), fungi, mites, nematodes, bacteria, etc.)
- on hawthorn, caused by *Eriosoma*, 17855
- insect, on *Quercus*, 8648
- of *Symphlocos fasciculata*, 8606
- of willow, insects in, 1625
- Gall midge(s). (See also *Cecidomyiidae*.)
- of red pine, associated with needle blight, 15803
- sternal spatula, development in *Rhabdophaga*, 11464
- Gallbladder. (See also *Bile*; *Bile ducts*; *Cholecystitis*.)
- absence in *Hydrax*, 704
- contractility, review, 12885
- contraction, injection of biliary passages by, 7500
- use as assay method, frog, 11038
- disease, hypoglycemia due to, 5500
- distension, effect on gastric hunger, 12643
- motility, dog, 12882, 12883
- dyestuffs, 1727
- epithelial cells, cytology, man, 2449
- function from evolutionary standpoint, 3752
- infections, bacteriological culture technic for, 11652
- chemotherapy, review, 15841
- diagnosis, 11652
- as influenced by cholecystokinin, 470
- by ferulic acid, 4151
- nerve net, structure, mammals, 15013
- Galleria* (p.1877) *mellonella*, pupation hormone, species specificity, 2478
- attacked by fungus, 8665
- transplants of larva, integument, pupation changes in relation to hormones, 13347
- Galleriinae* (Lepidoptera), p.1877¹
- Galli (Aves), of Japan, treatise, 8851
- Gallie acids, ultraviolet as affecting, 12690
- Galliformes (Aves), p.1881²
- Gallinula chloropus*, song, 5177
- cachinnans*, feeding habits, 7027
- Gallus* (p.1881), osseous tissue in adult and senile, age as affecting, 5914
- domesticus*. (See also *Chick* (for embryological material); *Domestic fowl*; *Poultry*.)
- mitochondria and vacuoles in cells, from embryo to adult, 7111
- Galumna emarginata*, vector of *Montezia*, 17986
- Galvanometer, Einthoven, performance with input through a vacuum tube microvoltmeter, 12738

- with liquid indicator.....3597
physical latent period.....3609
Galvanotropism. (See under *Tropisms*.)
GAMASODES (Arach.) (p.1874³), n. comb.,
 genus.....12340
Gamasus (p.1874³) *spinipes*, transf. to n.
 genus.....12340
Game. (See also *Conservation*.)
 animals, red deer, ecology, Scotland,
 conservation.....3535
 hunting, book.....14430
 mosquito control as affecting ducks,
 in Scandinavia, in 1076.....10434
 zones, correlated with vegetation and
 climate.....5419
Gametes. (See also *Germ cells*; *Egg*; *Fer-*
 tization; *Oogenesis*; *Sperm*;
 Spermatogenesis.)
 of *Gromia*.....6774
 sexuality in *Chlamydomonas*, u. v., as
 affecting.....10305
 union, light and chemicals as affecting,
 Chlamydomonas.....6600
Gametogenesis. (See *Egg*; *Meiosis*; *Oogene-*
 sis; *Sperm*; *Spermatogenesis*.)
Gametophyte(s). (See also *Embryo sac*;
 Embryogeny; *Ovule*; *Pollen*.)
 development in *Sequoia*.....10163
 ♀, of *Erythronium*.....15518
 of fern, morphology.....1104, 1105
 genes affecting, maize.....5309
 macro-, development in *Olea*.....1172
 ♂, in *Crinum* and *Hippeastrum*.....3451
 prothallium, dorsiventrality in ferns,
 factors causing.....17699
Gamma rays. (See also radioactive sub-
 stances, e.g., *Radium*.)
 activation of tobacco mosaic virus by,
 6652
 biological effects, rat.....16324
 effects on *Drosophila* pupae, vs. x-rays,
 on sea urchin eggs and sperm.....12699, 12705
Gammaridae (Crustacea), p.1874¹
Gammaridea (Crustacea), p.1874¹
Gammarus (p.1874¹), n. spp., 3308, 12384
Ganeriidae (Echinodermata), p.1872¹
Ganglion, nerve. (See *Nerve ganglion*.)
Ganglionic tract. (See *Neural crest*.)
Gannet, migration of British-born birds,
 14304
Ganoderma (p.1862²), additional descrip-
 tion.....4737
 lucid, *Hymenoglyphes* on.....8399
 morphogenesis and polarity of fruit
 body.....17493
 resinaceum, on oak, characteristics of
 woodrot due to.....3110
Gapeworms, control, chickens.....3253
Gar, short-nosed, food, Tennessee.....6967
Garbage, sterilization, for hog feed, 6736
Garcinia atrovirens, culture and uses,
 Malasia.....11983
Garden, plants, injury due to June beetle,
 Finland.....12201
 rock, book.....6507
 plants for, Ohio.....2977
Gardenia, canker (*Phomopsis gardeniae*),
 control.....3162
 chlorosis, soil temp. as affecting, 8621
 citrus whitefly on, control.....12181
Gardenia (p.1867³) *campanulata*, saponin
 from, as mosquito larvicide, 12223
 tehibangensis.....8437
Gardening. (See *Horticulture*; *Vegetables*.)
Garelia (p.1872³) *cincta* (*Salenia* c.), 14225
Gargaphia (p.1875³) *serjaniae*.....12377
Garique. (See *Chaparral*.)
Garlic. (See also *Allium*.)
 germicidal action of volatile oil, 11676
 hormones, enzymes and vitamins in,
 relation to medicinal value, 17697
 physiological effects.....4902
Garmannia (p.1880³), n. spp.....10623
Garra (p.1879³) *c. ceylonensis*, embryonic
 develop.....6959
Garrulus (p.1881³) *g. rufitergum*, bird
 banding.....14296
Gas(es), analysis, apparatus and technic,
 7317
 exchange. (See *Metabolism*; *Photosyn-*
 thesis; *Respiration*.)
 fuel, from farm wastes, production,
 6266
 generator, rôle in primary lung carci-
 noma.....4205
 poisoning, in welding, case.....5878
 poisonous. (See also specific gases, e.g.,
 Carbon monoxide, *Mustard gas*.)
 lesions caused by, juice from *Matri-*
 caria as affecting.....6552
respiratory, pipette for micro- detn.,
 7322
storage of apples in, temp. as affecting,
 17637
vapors and, apparatus for obtaining
 mixtures.....7309
Gas bacillus. (See *Clostridium* spp.)
Gas burner, for bacteriological culture
 use.....4720
 in production of nitric oxide.....11370
Gas edema. (See *Clostridium* spp.)
Gas-gangrene. (See also *Clostridium per-*
 fringens.)
 chemo- vs. sero-therapy.....17260
 immunization to, antiserum selection
 for.....872
 by formol-toxoid.....4446
 maggot- vs. chemo-therapy.....17256
Gasoline, with isopropyl ether, toxicity,
 7923
Gasparrinia (p.1862²), new species.....6364
Gasterocercodes (p.1876³) *braziliensis*, on
 cotton.....1497, 12198, 14116
Gasterosteidae (Pisces), p.1879⁴
Gasterosteus (p.1879⁴) *aculeatus*, as affected
 by cocaine.....14844
 as affected by procaine.....14845
 vitellogenesis formation, and centrifu-
 gation.....10724
Gastrin, studies.....12643
Gastritis. (See also *Enteritis*.)
 chronic, relation to gastric cancer,
 13223
 congestive, dogs.....3753
 in pernicious anemia, gastroscopy and,
 7882
 phlegmonous, pernicious anemia and,
 4240
Gastrochaena (p.1872⁴), n. sp.....6828
Gastrochaenidae (Mollusca), p.1872⁴
Gastrocnemius, in miners.....13278
Gastro-intestinal tract. (See *Digestive*
 tract.)
Gastropoda (Moll.), p.1872¹. (See also
 Slugs; *Snails*.)
 classification on basis of feeding habits,
 14228
 of medical importance, Sardinia, 3242
 muscle tonus regulation by pedal
 ganglia.....9498
 pulmonate, lepidosomes and secretion,
 7115
 relict fauna of East Alps.....7182
Gastrosaccus, seasonal occurrence off
 Plymouth.....1850
GASTROTAENIA (1870⁴) *cygni*, in
 Cygnus.....3281
Gastrotricha, p.1871¹
GATERIA (Arach.) (p.1874³), type *Gahr-*
 liepa fletcheri.....3314
Gaucher's disease. (See also *Anemia*,
 splenic; *Splenomegaly*.)
Gaultheria (p.1866⁴), tax.....4778, 15507
 culture and spp.....11972
Gautieria (p.1862⁴) *graveolens*, descriptive
 notes.....2812
Gavia (p.1881³), food habits.....9064
 immer, Trematode parasites from, 17931
 Gaviidae (Aves), p.1881³
 Gaviiformes (Aves), p.1881³
Gazella (p.1883³) *picticaudata*, in Thibet,
 5223
Geaster (p.1862⁴) *pseudostriatus*, descrip-
 tive notes.....2812
 triplex, dehiscence.....8401
Gecko vittatus, *Typhlonema* (Nematoda)
 from.....14216
Geese. (See also *Anser*.)
 census of black brant in California,
 3538
 Pilgrim, sexual dimorphism in down and
 adult plumage.....7153
 trematode parasites, Canada.....1590
Geigeria aspera, geigerin from, isolation
 and chemistry.....6541
Geigerin, from *Geigeria aspera*, isolation
 and chem.....6541
Gekkonidae (Reptilia), p.1880³
 eye, sclerotic plates, structure.....5879
Gel(s). (See *Colloids*.)
Gelatin, amino acid detn.....7290
 Chinese, in prevention of nutritional
 encephalomalacia, chicks.....2408
 epinephrin mixtures, in treatment of
 allergy.....14854
 feeding, effect on muscle fatigue, 7693
 films, physical properties.....12021
 -tryptone-albuminose and peptone, ana-
 phylactic responses.....9875
 water absorption, non-electrolytes as
 affecting.....8549, 10845
Gelechia (p.1877³), redefined.....16040
 gossypiella. (See *Pectinophora gossypi-*
 ella; *Platyedra* g.)
Gelechiidae (Lepidoptera), p.1877²

- Genes (*continued*)
zygotic lethal in chromosome 1, maize, 8932
- Genetics. (See also *Acquired characters*;
Cytogenetics; *Eugenics*; *Heredity*;
Hybrid; and under special topics,
e.g., *Gene*, *Inbreeding*, *Linkage*, *Muta-
tion*, etc.; under plants and animals
commonly used in genetic research,
e.g., *Datura*, *Drosophila*, *Oenothera*,
etc.)
of body color, *Habrobracon*, 3468
fo cancer in mouse, 3463, 11300
chromosome structure and, review, 7069
and cytology, review, 10711
of *Drosophila ananassae*, 1725
evidence for inheritance of acquired
characters, 3440, 3441
of garden plants, book, 10727
of incompatibilities in homomorphic
flowering plants, review, 83
introductory texts, 10726, 12515
livestock production and, 17072
mendelian ratios, nomogram for
analysis, 10749
 χ^2 table for, 10747
of *Neanthe* (small palm), 8929
numbers and ratios of genotypes and
phenotypes for hybrids, 8454
physiological aspects, review, 7244
plant, recent advances, book, 10730
principles text, 3455
of quality in wheat, 69
relation to human welfare and progress,
book, 18407
statistical treatment of data, 16217
systems in, origin, book, 7124
text, in Italian, 8923
- Geniculate body. (See under *Brain*.)
- Genins, of digitals glucosides, cumulative
action, cat, 9556
- Genitalia. (See also under names of ex-
ternal genitalia, e.g., *Penis*; and
under names of internal genitalia,
e.g., *Uterus*, *Vagina*.)
dysfunction, testosterone as affecting,
14979
elephantiasis, fistulous knotty, gono-
coccic (?) etiology in African
form, 11638
♀, as influenced by:
androgens, 3817, 3909
estradiol esters, ovariectomized rat,
11061, 11062
lysine deficiency, 9329
ovarian hormones and gonadotropic
substances in urine, *Di-
delphys*, 7969
sex hormones, rat, 11062
innervation, 11373
lipoid distr., menstrual cycle as af-
fecting, monkey, 12643
tumor development in, estrogen as
affecting, 2118
hypoplasia, gonadotropic hormone as
affecting, 16930
as influenced by:
estrogens, 5808, 16993
lizards, 9769
opossum, 11409
pituitary in syndrome of infantilism,
652
testosterone, *Ambystoma*, 4336
opossum, 11407, 11408
thyroidectomy, rats, 9697, 9698
innervation of genital skin in horse,
11395
lesions, in lymphogranuloma venereum,
blood protein and, 16914
♂, as influenced by adrenal cortex,
11054
by androgens, 3793
postnatal development in guinea pigs,
castration and, 13048
progressive growth, in German boys,
5925
of Pulmonates, anatomy and cytology,
4342
retarded development, in Laurence-
Moon-Biedl syndrome, 18196
tuberculous involvement, 18244
- Genito-urinary. (See *Urinogenital system*.)
- Genosoma (p.1876³), n. sp., 6367
- Gentian, effect on gastric mucosa, 531
- Gentian violet, effect on *Clonorchis sinensis*
in vitro, 4552
on *Strept. viridans* in fibrine clot, 483
in oxyuriasis therapy, 17282
- Gentiana (p.1866⁴), in China, 11891
terglouensis, phyllotaxy morphogenesis,
2912
- Gentianaceae (Dicotyledones), p.1866⁴
- Gentianales (Dicotyledones), p.1866⁴
- Geobotany. (See *Ecology, plant*; *Phyto-
geography*.)
- Geodin, *Aspergillus* producing, molecular
constitution and synthesis of
esters, 11761
- Geography. (See also *Phytogeography*;
Zoogeography. For material indexed
geographically, see *Geographic In-
dex*, p.1884.)
factors, in influenza epidemiology, 15310
- Geology, bibliography and index (1935-
1936), 5287
relation to small distr., England and
Wales, 12261
- Geometridae (Lepidoptera), p.1877¹
- Geometrinae (Lepidoptera), p.1877¹
- Geomyidae (Mammalia), p.1882¹
- faunal relations and ecology in, 14309
- Geomys* (p.1882¹) *breviceps*, dist. in relation
to soils, 3492
tax., 5221, 10657
- Geonomas* (p.1864⁴) *dominicana*, 11863
- Geopelia* (p.1881⁵), n. subsp. in, 7022
- Geophilidae (Myriopoda), p.1873³
- Geoplana* (p.1869³), n. sp., 10541
- Geoplanidae (Platyhelminthes), p.1869³
- Geosciurus capensis*, new tapeworm from,
15987
- Geotrichoides* (p.1863⁴), spp. included in
Trichosporon, 4645
- Geotrichum* (p.1863⁴), *Pseudomycoderma*
as subgenus of, 4638
- Geotropism. (See under *Tropisms*.)
- Gephyrocharax* (p.1879⁴), new spp. from
Panama, 1637
- Geraniaceae (Dicotyledones), p.1866⁴
- pollen in honey, 8670
- Geranial. (See *Citral*.)
- Geraniales (Dicotyledones), p.1866⁴
- Geranium. (See also *Pelargonium*.)
- Thielaviopsis basicola* on, 15890
- Geranium* (p.1866⁴), n. syn., 1158
- Gerbera jamesoni*, control of mites and
nematodes on, 10416
- Gerbil, plague susceptibility, in Tunisia,
999
- Germes. (See *Bacteria*.)
- Germ cells. (See also *Egg(s)*; *Oogenesis*;
Sperm; *Spermatogenesis*.)
characteristics, somatic cells and, re-
view, 729
chromosome elimination after migration
to gonadal position, *Sciara*, 9780
development in rats and guinea pigs,
17038
primary, origin and development, 737
origin in regenerating testis, fowl,
656
- Germ layers, ectoderm, development fac-
tor, insects, 9781, 9782
presumptive, localized heat as affect-
ing, *Hyla*, 33334
stages in differentiation of ear, 4393
ectoderm, origin and fate in isopods,
9783
rôle in regional development of
chorda-mesoderm, 15081
rôle in development, 17040
- Germanin, in bilharziasis therapy, 8697
- detn. and retention in body, 8175
- douline therapy by, 6135
- effect on trypanosomes, 13543, 15210
- in *Trypanosoma brucei* infections, small-
est protective dose, 11608
- in trypanosome infection of dogs, 4680
- in trypanosomiasis therapy, effects,
14170
- Germicides. (See also *Antiseptics*; *Bacteri-
cides*; *Disinfectants*; *Fungicides*;
under special agents, e.g., *Hexyl-
resorcinol*, *Phenol*.)
acids of aliphatic series as, 10017
action, density of bacterial suspensions
as affecting, 10029
advances since Lister, 11692
alcohols as, 10026, 15321
surface tension and, 979
aromatic acids as, effect on tubercle
bacilli, 15304
bromine as, 4668
coefficients, of liquid antiseptics, detn.,
4649
comparisons, 11703
efficiency tests, 8314, 10029
11703, 11709, 13641
inorganic acids as, 10017
oral, efficiency, 2104
orthophenylphenol as, 2672
- Germination. (See under *Pollen*; *Seed*;
Spore; *Sprouting*; *Tuber*.)
- Germo* (p.1879⁴) *alabunga*, from Vancouver
Island, 3377
- Gerrhonotus* (p.1880³), race variations in
western U. S. and Mexico, 3403
- Gerrhosauridae* (Reptilia), p.1880³
eye, sclerotic plates, structure, 5879
- Gerrhosaurus* (p.1880³) *maltzani*, 8822
- Gerridae (Hemiptera), p.1875²
striding habits, 8788
- Gesneriaceae (Dicotyledones), p.1867²
- Gestation. (See *Pregnancy*.)
- Getah, in *Palauquian* leaves, origin and
chemistry, 4908
- Giardia* (p.1868³), chemotherapeutic of in-
fection in man, 6141
new spp., 6773
diagnosis of infection by, 6141
incidence and therapy, Argentina, 6715
intestinalis, incidence, Cuba, 6720, 6741
Florida, 14162
lamblia, cysts, passage through stomach,
rat, 8712
effect on fat absorption, children,
17920
incidence, Indiana, 1476
Saskatchewan, 17905
muris, localization in rats, 1553
- Giardiasis. (See also *Giardia*.)
clinical aspects, 10489
effect on fat absorption, children, 17920
therapy, 6715, 14192
- Gibberella saubinetii* on barley and wheat,
resistant var., 6674
- Gibbon. (See also *Hylabates*.)
blood groups, 13526
coronary arteries, anatomy, 8012
development of frontal sinuses in, 9717
ovary, structure in pregnancy, 695
- Gigartinales (Algae), p.1860⁴
- Gigartineae (Algae), p.1860⁴
- Gila monster, olfactory formations, 9676
- Gilia* (p.1867²), n. syn., 1158
- Gill covers, in salmon, defects, 764
- of crayfish, *Cothurnia* in, 8723
- Gimingham, C. T., portrait, 7075
- Ginger (*Zingiberis* ?), nematode spp. in-
festing, 17772
- Gingiva, hard and soft diet as affecting,
dog, 16452
- Gingivitis, and vit. C deficiency, in Green-
land, 14937
- Ginkgo*, pollen longevity, 6380
- Ginseng, estrus-inducing properties, 1847
- Girafidae (Mammalia), p.1883⁴
- Girdle(s), shoulder, musculature in moles,
4360
- Girdling. (See *Ringling*.)
- Girella nigricans*, reaction to temp.
gradients, 3983
- Gitanopsis*, critical notes, 3307
- Githopsis* (p.1867²), n. syn., 1158
- Gizzard. (See under *Stomach*.)
- Gjurašin, Stjepan, biography, 16142
- Glacial period. (See also *Quaternary*, in
Paleontological Index (p.1893);
Post Glacial.)
last, climate, review, 3483
- Glaciation in relation to streams,
Michigan, 104
- Glaciers, of Alaska, 7191
- Gladiolus, growth and flowering, relation
to corm characters, 8498
rooting of corms, auxins as affecting,
1362
- Gladiolus* (p.1865⁵), tax., 15489, 15590
- Antholyza* hybrid, sterile, 5322
- fragrant hybrid, 10729
- pollen viability, factors affecting,
17695
respiration of corms, during
dormancy, 17693
- thrips. (See *Taeniothrips simplex*.)
- Gland(s) (animal). (See also *Endocrine*;
Secretion; but especially under spe-
cific glands, e.g., *Thyroid*; and un-
der organs and regions, e.g., *Go-
nads*, *Ovary*, *Pancreas*, *Skin*,
Stomach.)
abdominal, in Hemiptera, 2476
accessory sex, castration and gonado-
tropic hormones as affecting,
opossum, 16992
ant. pituitary like, in pharyngeal mu-
cosa, function, 2442
apocrine, study, 8596
dermal, in shrews, 4344
structural changes in relation to
secretory activity, 11420
ectodermal, morph. and secretions in
arthropods, 9790
in head capsule of coccinellid beetles,
classification, 2478A
labial, secretions in arthropods, 9790
lacrimal, mixed tumors, metastases,
7353
secretion, glucose in, 16488
mucous, cytology, gastropods, 8056
odoriferous in harvest spider, 3320

- preorbital of antelopes,.....13285
 prostomial, of leech,.....2474
 ring, hormonal influence on puparium
 formation in flies,.....9784
 structure, in normal and lethal *Drosophila*,.....1780
 sebaceous, adenomata, hist. in tubercular
 sclerosis,.....2407
 sinus, effect on viability and ecdysis,
 crustaceans,.....14611
 tissue, elements in, spectographic analysis,
13815
 venom, histophysiology,.....702
 volumetric detn.,.....10878
 wt. after ovariectomy,.....16618
 Glandular fever. (See *Agranulocytosis*;
Mononucleosis, infectious.)
 Glass ampule, soluble constituents, chem.
 and pharm.,.....16395
Glaucom flavum, in New Zealand, 10124
GLAUCOCARPUM (Dicot.) (p.1865²), 2878
Glaucoma, blood P changes in,.....11325
 shallow chamber type, operative procedure,
7637
Glaucoma-Colpidium group of ciliates, anti-
 body reactions,.....8172
 group of ciliates, antigenic properties,
8173
Glaucomys sabrinus lascivus, notes,.....18105
Glaucidium (p.1881³) *perlatum*, feather pat-
 tern of head,.....7035
Gleditsia triacanthos, wilt and canker dis-
 ease,.....12126
Gleichenia (p.1863²), n. sp.,.....1097
Gleicheniaceae (Pteridophyta), p.1863²
Glenodinium de Hovasse, structure, repro-
 duction, and nutrition,.....8715
cinctum, structure, reproduction, and
 nutrition in,.....8715
 Gli. (See *Neuroglia*.)
 Gliadin, in high fat diets, fatty livers
 and, rat,.....3700
Gliocladium (p.1863²), n. spp.,.....11822
 Globin, sulphydryl groups in,.....7284
 Globin-insulin, prolonged activity,.....5780
Globorotalia (p.1868²) (*Pulvinulina*) *menar-
 dii-tumida*, Java,.....14198
Globorotaliidae (Protozoa), p.1868²
Globularia (p.1867²), monograph,.....4788
Globulariaceae (Dicotyledones), p.1867²
 Globulin(s). (See also *Amandin*; *Edestin*;
Englobulin; *Pseudoglobulin*.)
 antibody, H-ion adsorption by,.....802
 in egg white,.....9822
 in jack bean, molecular wt.,.....1344
 lacto-, crystalline, digestion by trypsin
 and chymotrypsin,.....14457
 in milk, variation during lactation, 4414
 of pneumococcus antisera, fractionation,
8117
 † **GLOBULINEA** (Algae) (p.1860⁴) *gigan-
 teus*,.....4727
Gloekeria (p.1867²), n. sp.,.....6437
Gloeocapsa (p.1860⁴), n. sp.,.....8385
Gloeosporium alborubrum, on *Hevea*,.....3111
perennans, on apple, development follow-
 ing injury by wound dressing,.....15859
Glomerella (p.1861³), n. spp.,.....17500
Glomericius (p.1870²) *propositus*,.....6803
Glomerulus. (See *Kidney*.)
Gloniella (p.1861⁴) *ambigua* (*Hysterium*
kerstenii),.....11819
Glonopsis (p.1861⁴), tax.,.....11812, 11814
Glossina (p.1877⁴). (See also *Fly, tsetse*.)
moritans, breeding of,.....8656
 as vector of *T. gambiense*,.....14169
 as vector of *Tryp. rhodesiense*,.....15954
palpalis, eradication method in Kenya,
5064
 Glossitis, endemic, nicotinic acid as affect-
 ing,.....16922
Glossopetalon (p.1866²), n. sp.,.....1158
Glossoscolecidae (Annelida), p.1871⁴
Glozinia speciosa, *Phytophthora cryptogaea*
 attacking,.....3169
 Glucides. (See *Sugars*.)
 Glucido-lipidic antigens, specificity in
Salmonella,.....2550
 Gluco-calcium, in trichinosis therapy,
8713
 Gluconate, calcium, in measurement of
 circulation time,.....16750
 Gluconic acid, effect on blood and urine
 pH, rabbits,.....4120
 phospho-, oxidative breakdown,.....7263
 production by *Aspergillus niger* from
 glucose, factors affecting, 2725
 Glucosamine, note on,.....16345
 Glucose, in blood. (See *Blood, sugar*.)
 in body fluids after inj.,.....7377
 creatinine production by bacteria from,
6305
 Glucose (continued)
 detn. in presence of pentoses, method,
17736
 in sugar mixtures,.....16386
 diazotized p-aminobenzyl β -glycoside,
 chemo-immunological relations,
833
 dissimilation by *Bacillus* spp.,.....17453
 effect on:
 alcohol in blood,.....12643, 16776
 blood phosphates, diabetes,.....5852
 blood sugar of pellagrins,.....14946
 carbohydrate metabolism, guinea pig,
16491
 circulatory system,.....11174
 gastric secretion,.....12643
 growth, *Phycomyces*,.....14003
 ketonuria,.....16494
 liver cells, cytology,.....2443
 lymph flow,.....7386
 oxidation of alcohol in vitro,.....3687
 O₂ consumption of plasmodia, free
 from red cells,.....15953
 pituitary ketonuria,.....393
 plasma and erythrocyte glycogen,
7343
 potassium CN toxicity, in yeast res-
 piration,.....12107
 respiration, algae,.....14015
 stomatal morphogenesis, in *Pinus*,
2911
 urea action on muscle permeability,
5429
 excretion during constant glucose in-
 fusion, diuresis as affecting,.....3943
 by kidney in diabetic dog,.....2144
 fermentations, by *Aerobacter indologenes*,
 aldehydes and fatty acids as af-
 fecting,.....11763
 by yeasts, glycogen synthesis and,
4690
 in food industries and its health status,
11686
 formation, from acetoacetic acid in rat
 kidney,.....7434
 in fasted hypophysectomized dogs,
12643
 gastric absorption, dog,.....12904
 gastric gland permeability to,.....12643
 gluconic acid production from *Aspergillus*
niger, factors affecting,.....2725
 ingestion, high, effect on body wt. and
 comp., rat,.....9193, 10983
 intestinal absorption,.....5598, 9265
 adrenalectomy and NaCl as affecting,
7499
 intoxication, forms,.....14539
 in lacrimal gland secretion,.....16488
 lactic acid cycle, in organs, dog,.....3684
 lactic acid formation from, catalysis by
 anions of weak acids,.....9088
 metabolism, amino acids as affecting,
 hypophysectomized and insulin-
 treated rabbits,.....2026
 substances in, effect on cerebral po-
 tentials during hypoglycemia,.....7663
 in thyroidism,.....9644
 nerve block by,.....447
 partition between blood and vitreous
 body, selachii,.....12746
 tolerance. (See also *Carbohydrate, toler-
 ance*; *Sugar, tolerance*.)
 caffeine as affecting, man,.....9543
 in depancreatized dog, sucrose and,
12815
 in rheumatic vs. other fevers,.....8276
 test, children,.....2341, 7820
 in treatment of opium addiction, 5740
 in urine. (See *Urine, sugar*.)
 utilization by extra-abdominal tissue,
 kidney function and,.....297
 vit. C protection by,.....5571
 Glucosides. (See *Glycosides*.)
Glumiflorae (Monocotyledones), p.1864²
 Glutamic acid, anaerobic formation in
 tissues,.....12643
 detn., micro,.....10865
 enzyme responsible for transfer of
 amino group,.....9092
 in malignant tumors,.....14882
 metabolism and energy production,
8678
 synthesis in animal tissues,.....14446
 Glutamine, streptococci requirement, 8861
 Glutaric acid, α -amino. (See *Glutamic*
acid.)
 Glutathione. (See also *Sulphydryl group*.)
 as bacterial growth factor,.....17474
 in blood. (See under *Blood*.)
 derivatives, effect on planaria,.....16875
 detn.,.....1921, 16338, 16370
 disulfide linkage, hydrolytic splitting,
12673
 effect on:
 esterase in organs,.....3735
 growth in presence of bromobenzene
 and naphthalene,.....3680
 spawning in *Nereis*,.....9451
 spirochaetoidal activity,.....17245
 toxicity of cobra venom,.....16755
 effects after thymectomy,.....389
 moniodoacetic acid as affecting, 11764
 in organs and blood of young animals,
10958
 reduced, complement reactivation by,
927
 detn.,.....1920, 12708
 in tissues, insulin sensitivity and, 9334
 strychnine derivatives as affecting,
 rabbit,.....16754
 Gluten, changes in wheat during sprouting,
3079
Glycer (p.1871²), syn.,.....17962
 Glyceraldehyde, acetone, studies, 10977
10978, 10979
Glyceridae (Annelida), p.1871²
 Glyceride(s). (See also *Fats*; *Oils*; etc.)
 in depot fat, ox.,.....303
 enzymatic hydrolysis,.....14456
 optically active, synthesis from d(+)-
 acetone glycerol,.....10978, 10979
 Glycerin, effect on bacteriophage absorbed
 by blood,.....953
 esters, utilization,.....7435
 isotonic conc., detn.,.....5435
 permeability of erythrocytes to,.....3553
 of marine eggs to,.....16303
 of plant cells to,.....1363
 toxicity,.....4131
 Glyceryl trinitrate, effect on blood flow,
16734
 on thioarbiturate action on heart,
525
 elimination,.....2283
 Glycine, creatinine production by bacteria
 from,.....6305
 effect on:
 blood urea and glucose,.....12890
 hepatic glucose output after ablation
 of adrenals and pituitary,
7388
 muscle fatigue,.....13095
 nutrition of tomato roots,.....17723
 smooth muscle,.....5773
 xanthine oxidase activity,.....5463
 metabolism,.....7415, 16481
 energy production and,.....3678
 toxicity, in fowl,.....2509
Glycine hispida. (See also *Soja*; *Soybean*.)
 Glycocol. (See *Glycine*.)
 Glycogen. (See also *Carbohydrates*.)
 antigenicity of Al(OH)₃ adsorbed,.....922
 in brown and white fat, rat,.....5540
 in cells of vaginal smear, testosterone as
 affecting,.....2125
 in *Cysticercus*,.....17910
 deposition in liver,.....7508
 detn., standardization of animals for,
12643
 formation, from dicarboxylic acids, 299
 regulation,.....9197
 in hexose fermentation process by
 yeasts,.....4690
 leucopenia due to,.....7750
 in liver. (See under *Liver*.)
 localization in striated muscle,.....4361
 metabolism, radioactive P in study,
7685
 in muscle. (See under *Muscle*.)
 phosphorylation, in Jensen sarcoma
 cells,.....13200
 in plant tissues, demonstration methods,
15788
 -protein synthesis during glycogen syn-
 thesis,.....12914
 reserves, insulin as affecting,.....2287
 -storage disease, in cardiac enlargement,
 infants,.....11184
 Glycol(s). (See also *Ethylene glycol*;
Propylene glycol.)
 toxicity,.....4131, 9552, 11363, 16758
 Glycolipids. (See *Cerebroside*.)
 Glycollic acid, thio-. (See *Thioglycollic*
acid.)
 Glycolysis. (See also *Sugars*; and specific
 sugars, e.g., *Glucose*.)
 anaerobic, in heterotransplanted tumors,
 rat,.....13231
 in *Venus mercenaria*,.....10981

- Glycolysis (continued)
 in blood, normal and diabetic, . . . 5501
 in 24 hours, . . . 5502
 in brain tissue, factors affecting, rat, . . . 14719
 coenzyme for, prep. and detn., . . . 16355
 of erythrocytes, in cancer, diagnostic value, . . . 14898
 inhibition, . . . 14479
 in cytolized brain, rat, . . . 14719
 insufficiency, blood chromic index as measure, . . . 8625
 intermediate reactions in, as indicated by radioactive P, . . . 5544
 of kidney tissue, x-rays as affecting, . . . 14469
 in nervous tissue, . . . 5660
 in pancreas, . . . 2027
 rate, mathematical expression, . . . 14538
 in renal tissue, . . . 5659
 of sperm and motility, . . . 11096
 of tissues, factors affecting, . . . 7413
 of tumor tissues, growth rate and wave length of radiation as affecting, . . . 5470
- Glycoproteins. (See also specific glycoproteins, e.g., *Mucins*.)
 in blood. (See under *Blood*.)
 sugars in, detn., . . . 16356
- Glycosides. (See also specific glycosides.)
 cardiac, carcinogenic action, . . . 2371
 effect on heart, toad and frog, . . . 514
 sugar component, significance, . . . 513
 digitalis-like, effect on heart, . . . 11183
 effect on carcinoma, mice, . . . 5801
 emesis, origin, . . . 12843
 fluorescence, use in identification, . . . 8555
 formation in plants, use in taxonomy, . . . 8595
 from *Kalmia polifolia*, extraction and chem., . . . 6544
 in leaves, rôle in metabolism, . . . 8533
 review, . . . 14441
 of sterol and sex hormone series, 3869
 synthesis, hydrolysis by yeast and kinetics, . . . 10329
 by potatoes, when treated with ethylene chlorhydrin, . . . 6585
- Glycosuria. (See *Diabetes*; *Insulin*; *Urine*, *sugar*.)
 Glycuronic acid. (See *Glucuronic acid*.)
Glycerhizopis (p.1865⁴) *syriaca*, . . . 10119
 Glyoxaline derivatives, effect on heart, frog, . . . 14816
Glyphidrilus (p.1871⁴) *annandalei*, anatomy, . . . 3289
Glyptosaurus (p.1880⁹) (†) *giganteus*, in N. America, . . . 3404
Glyptostrobilus (p.1864⁴), of Italy, (N), . . . 13721
Glyptotermes tridipennis, flagellate in, . . . 12284
Gmelina arborea, wood properties, . . . 13959
Gnaphalium (p.1867⁴), n. combs., . . . 8442
 Gnat, scab, on potato, Ontario, 1937 . . . 10419
Gnathonaemus (p.1879⁹) *macrolepidotus*, ear, structure, . . . 15001
 retina, structure, . . . 13814
Gnathorichus (p.1876³), n. sp., . . . 6885
Gnestoeros (p.1869⁹), n. combs. and syn., . . . 10540
 Gnetaceae (Gymnospermae), p.1864²
 Gnetales (Gymnospermae), p.1864²
 phylogeny, relationships, . . . 1169
Gnomonia (p.1861³), n. sp., . . . 15453
 ulmea, on elm, life history and parasitism, . . . 1424
Gnomontopsis (p.1861³), n. sp., . . . 15453
Gnorischema (p.1877⁴), spp. on tomato in California, control, . . . 3189
 Goat, avian tubercle bacilli in udder, 1014
 blood comp., . . . 14507
 congenital myotonia in, drugs affecting, . . . 2312
 dairy, disease problems, . . . 15369
 exptl. trichostrongylosis in, . . . 14158
 feeds for, cacao shell meal as, . . . 9811
 growth, milk production and energy metabolism, . . . 11471
 hermaphroditism, . . . 16195
 as host to *Schistosoma spindale*, . . . 1544
 lactation, blood precursors of milk protein in, . . . 14684
Linguatula larvae in, . . . 8695
 liver fluke in, longevity, . . . 6743
 milk, breed comparison, Great Britain, . . . 4410
 comparison with cow's, . . . 8078
 composition, . . . 7404
 serological identification, . . . 8184
 motor conditioning in, . . . 12643
 multiple births in, . . . 17079
 myiatic wounds, pH, . . . 3200
- parasites, Hawaii, . . . 17916
 partition of serum globulins, . . . 7376
 pyrogenic infections in, . . . 15358
 stephanofilariasis, . . . 3245
 tuberculosis in, . . . 15356
 in Turkey, discussion, . . . 11489
- Goat-pox. (See *Varitola*.)
 Gobiesocidae (Pisces), p.1880⁴
 Gobiidae (Pisces), p.1880³
Gobio fluviatilis, host for n. genus of tape-worm, . . . 14211
 Gobioides (Pisces), p.1880³
Gobiomorphus (p.1880⁹), n. spp. from Hawaii, . . . 8815
 trematode parasite, . . . 17937
Gobiosoma (p.1880³), new spp., . . . 10624
Gobulus (p.1880³) *myersi*, . . . 10623
 Goiter. (See also *Thyroid gland*.)
 in chicks, histopath. and iodine relations, . . . 17392
 cycle, anatomic findings, . . . 4340
 effect on basal metabolism, . . . 4277
 exophthalmic, adrenal cortical extract as affecting, . . . 7900
 incidence, in U. S., . . . 4289
 path.-phys. of exophthalmos, . . . 11351
 pharyngeal infections and, . . . 4231
 vs. rheumatic fever, . . . 9655
 vit. C metabolism in, . . . 2071
 nodular, iodine balance in, . . . 4288
 production, by low iodine, yeast and thiamin as affecting, rat, . . . 3723
 rachitogenic diet, rat, . . . 3873
 by raw and treated soy bean flour, rat, . . . 10959
 radioactivity of soil and drinking water as affecting, . . . 14974
 simple, incidence in U. S., . . . 4289
 toxic, blood iodide reserve in, . . . 9154
 plasma lipids and, vs. anxiety states, . . . 9632, 9633
- Gold, aplastic anemia due to, . . . 9622
 colloidal, in arthritis therapy, statistics, . . . 9938
 distr. in lung after inj., pneumothorax as affecting, . . . 7538
 infectious polyarthritis therapy by, . . . 9916
 compounds, rat polyarthritis therapy by, . . . 11582
 sodium thiosulphate, in arthritis therapy, statistics, . . . 9938
- Goldfish. (See also *Carassius auratus*.)
 morph. of 2 vars., relation to cytology of pituitary body, . . . 12511
 myxosporidian parasite, . . . 17926
- Golgi apparatus. (See also *Cytoplasm*, *components*; *Neutral red granules*; *Vacuoles*; *Vacuome*.)
 in cells of endostyle, *Branchiostoma indicum*, . . . 14354
 and centrifugation, oocyte, *Gasterosteus*, . . . 10724
 of genital apparatus of pulmonates, . . . 4342
 in intestinal cells of *Lumbriconereis*, . . . 1738
 in liver cells of *Rhacophorus maculatus*, . . . 1738
 in nerve cell of mouse, . . . 7110, 7945
 in striped muscle fibers, . . . 2451
 structure and rôle in secretion, vertebrates and invertebrates, . . . 2479
 in tissues of Amphibia, . . . 8919
 and vacuole system, in *Euglena* and *Copromonas*, . . . 1721, 8915
 and vacuoles in striated muscle, . . . 1729
 in Voivocales, . . . 7116
- Gomontia* (p.1860²) *polyrhiza*, in Scandinavia, . . . 11805
Gomphocythere (p.1878³), new spp., 10569
 distr., zoogeography, . . . 10569
Limnocythere sp. trans. to, . . . 10569
Gomphus episcopus, as interm. host for *Prosthogonimus*, . . . 12258
Gomtiotrema (p.1870⁴), synonymy, . . . 6788
 Gonacrine, in *Giardia* infection therapy, . . . 6141
 Gonad. (See also *Castration*; *Egg*; *Ovary*; *Sperm*; *Testis*; *Transplantation*; etc.)
 ablation, effect on:
 body wt. cycles, mouse, . . . 9410
 carcinogenesis by dibenzanthracene, mice, . . . 14907
 creatin-creatinin output, . . . 13021
 exophthalmos of Grave's disease, . . . 11351
 growth of cartilage and bone, 9373
 mineral metabolism and body wt., rat, . . . 9367
 reimplanted tumors, rats, . . . 11282
 development, light as affecting, . . . 12960
 derived from heteroplastic transplants of preprimordia, growth *Ambystoma*, . . . 12333
- effect on food intake, toad, . . . 8957
 growth and differentiation, adrenalectomy as affecting, . . . 15025
 as influenced by:
 mammalian hormones, *Rana*, . . . 11412
 pituitary extracts, teleosts, . . . 5895
 sex hormones, frog larvae, . . . 16982
 thyroidine, guinea pig, . . . 13303
 vit. E injections, guinea pig, . . . 5897
 x-radiation, chick, . . . 12695
 pituitary control, *Fundulus*, . . . 9345
 review, . . . 7244
 tubules, regeneration in sea cucumber, . . . 5969
- Gongylonema verrucosum*, in sheep and cattle, . . . 17907
Goniobasis, new cercaria from, . . . 5106
 depygis, new sp., *Cercaria* from, . . . 6789
Goniodes (p.1875²), n. spp., . . . 6941, 18038
 GONIODONTOMYS (Mamm.) (p.1883³)
 disjunctus (N), . . . 7056
 GONIOINFRADENS (Crust.) (p.1874³)
 n. subg. of *Charybdis*, . . . 6848
Goniolomus (p.1866⁴), n. sp., . . . 8444
 Goniophoridae (Reptilia), p.1880⁴
Goniopholis (p.1880⁴), cast of brain and tympanic cavities, anatomy, 13287
Goniophyto (p.1878³), tax., . . . 1623
 GONIOSUFRADENS (Crust.) (p.1874³)
 n. subg. of *Charybdis*, . . . 6848
Goniotalamus (p.1865⁴) *gabriciana*, correct names, . . . 8430
Gonocephalus seriatum, as interm. host of poultry nematode, . . . 10478
 Gonococcus. (See *Neisseria gonorrhoeae*.)
 Gonocyte. (See *Germ cells*.)
Gonolobus (p.1867⁴), n. sp., . . . 2867
Gonomyia (p.1877³), n. sp., . . . 14251
 Gonorrhea. (See also *Neisseria gonorrhoeae*.)
 chemotherapy, . . . 4578, 6147, 15198
 . . . 15204, 15264, 17258
 of cervicitis due to, . . . 13539
 control, advances in, . . . 15295
 results in Canada, . . . 11675
 diagnosis, by gonococcus filtrate test, . . . 15289
 epidemiology, review, . . . 15342
 flavicid therapy, . . . 4574
 immunotherapy, . . . 8140
 of lower ♀ genital tract, chemotherapy, . . . 11597
 lysozyme therapy of adnexal, . . . 980
 as public health problem, . . . 11700
 serological management, . . . 9985
 serodiagnosis by complement fixation, with increased antigen, . . . 6114
 methods compared, . . . 928, 8096
 sulfanilamide therapy, blood and urine content in, . . . 9923
 vaccine, prep. method, . . . 11854
 ulron affecting, . . . 2827
- Gonyocephalus*, *Strongyluris* (Nematoda) from, . . . 14216
Gonzalagunia (p.1867³), n. spp., 6429, 6437
 Goodeidae (Pisces), p.1879³
 Goodeiacea (Dicotyledones), p.1867⁴
 Goodey, T., portrait, . . . 7075
Goodyera (p.1865³), n. syn., . . . 1158
 Goose. (See *Geese*.)
 Gooseberry (ies). (See *Ribes*.)
 Gopher. (See *Citellus*; *Geomys*.)
 Gordon's encephalitogenic agent, nature, . . . 2613
 Gordon test, in Hodgkin's disease, 13237
 . . . 13240, 13248
- Gorgodera* (p.1869⁴) *amplivava*, abnormal reproductive system, . . . 6796
 minima, in *Siren*, . . . 6716
 Gorgoderidae (Platyhelminthes), p.1869⁴
Gorgoderina (p.1869⁴) *attenuata*, life cycle, . . . 14208
ochistorchis, Oklahoma, . . . 1600
 Gorgonin, amino acid comp., . . . 5447
 Gorilla, blood groups, . . . 13521
 coronary arteries, anatomy, . . . 8012
 development of frontal sinuses, . . . 9717
 estrus cycle and menarche, . . . 5672
 maxillary antrum, . . . 728
 ovary, structure in pregnancy, . . . 695
 Gorilla, material in American collections, catalogue, . . . 2459
Gosiphilus (p.1873³) *aximus*, . . . 5123
 Gosset, Wm. Sealy, biography, . . . 8891
Gossypium (p.1866²), (See also *Cotton*.)
 armourianum-G. *thurberi* hybrid, morphology and fertility, . . . 7129
 Gossypol, in poultry ration, egg deterioration from, . . . 15118
Gouania (p.1866²) *mangarevica*, . . . 2858
 Gould, John, biography, . . . 3427
 Gout, nodules of scleromalacia perforans and, . . . 2835
 Gradient(s). (See also *Polarity*.)
 in development of after-feathers, . . . 699

- physiological, vital stain reduction, Oligochaeta,11467
- Graellsia isabellae* r. *galliae* in Alps,12392
- Graft(s) (animal). (See *Transplantation*.)
- Graft(s) (plant). (See *Propagation*.)
- Graft hybrids. (See *Chimera*(s).)
- Grafting, plant. (See under *Propagation*.)
- Grahamella*. (See also *Bartonella*.)
- review,6158
- Grain. (See also *Cereal*(s); *Crop*(s); and especially specific grains, e.g., *Wheat*.)
- analyses, Italy,8457
- as food for wild birds, phenology and classification,5420
- staining with Bismarck brown, wheat,16116
- Gram. (See *Cicer arctium*.)
- Graminales (Monocotyledones), p.1864²
- Gramineae (Monocot.) p.1864². (See also *Grass*(es).)
- Grammitis* (p.1863²), n. sp.,8421
- Gram-negative bacteria. (See *Bacteria*, gram-negative.)
- Grandier, Alfred, biography,18
- Granulation tissue, resistance to pyogenic bacteria,2588
- Granulocytes. (See *Leucocytes*.)
- Granulocytopenia, from amidopyrine, 4146
- Granuloma, coccidioidal pathogenesis of initial acute stage,6204
- pulmonary, arrested lesions,15270
- nasal, in cattle, due to schistosomes,1545
- paracoccidioidal, case report,13621
- ulcerative, in pigs,2697
- Grape(s). (See also *Vitis*; *Wine*.)
- acids,6270
- Botrytis* rot, control,1459
- comp. and flavor, relation to rootstock and leaf surface,1250
- Cu in, soil and fungicide content as affecting,15405
- diseases and pests, So. Australia,1483
- fermentations for wine, *Eudemis botrans* as affecting,11772
- Fusicoccum viticolum* on,15808
- genetics,8927
- green manure for, *Medicago lupulina* as,11975
- hot-house, storage, technic,10215
- injury by lightning,1445
- juice, pasteurization,1020
- vit.-B content of California,13672
- maturity, index to,1235
- mildew (*Oidium*), overwintering organs,1423
- minerals in leaves, var. differences,13895
- mites on, control by Se spray,3176
- Muscadine, culture and properties, Georgia vars.,4874
- Muscat, volatile acid fermentation in wines from,10038
- pigments in leaves, chem.,6612
- pruning and fertilizers for, Ark., 17626
- pruning and thinning as affecting, 3003
-15608
- red leaf disease, mite control as factor in,3169
- root formation on cuttings, heteroauxin as affecting,3059
- rootstocks resistant to *Phymatotrichum*,13899
- variety tests, Switzerland,2934
- vein banding and leaf necrosis, transmission by grafting,3169
- vintage types, plant indicators for,15585
- wine-making qualities, climate as affecting,3013
- yield and vigor, rootstocks as affecting,3006
- Grape fruit. (See also *Citrus*.)
- insect pests, control,14090
- leaf-bronzing, a Mn deficiency disease,8620
- N metabolism,17634
- rootstocks for, relation to soil,8505
- scab (*Elsinoe*), control,14037
- scale, control by oil sprays,10403
- Grapevines, silage from,6264
- Grape worm. (See *Polythrostis botrana*.)
- Graphidaceae (Fungi), p.1862²
- Graphidium strigosum*, physiology and development,10548
- Graphis* (p.1862²), n. spp.,17503
- Graphium rubrum*, stain of *Machilus* wood due to,12122
- Graphocephala* (p.1875⁴) coccinea, on rhododendron,17881
- Grapholita molesta*. (See *Laspeyresia molesta*.)
- Grapsidae (Crustacea), p.1874³
- Graptocoriza* (p.1875²) thomasi,16085
- Graptoleberis*, in S. hemisphere,12320
- Graptolitoidea, p.1869⁴
- Grass(es). (See also *Forage crops*; *Grassland*; *Grazing*; *Hay*; *Meadow*; *Pasture*; and especially under kinds, e.g., *Dactylis*, *Lolium*, *Poa*, *Timothy*, *Wheat*, etc.)
- anomalous inflorescences in,17514
- associated with *Pinus*, root competition,3510
- Atlas sorgo, natural cross,1149
- bent. (See under *Agrostis*.)
- Bermuda, effect on *Melanoplus*,17875
- hibernating beetles on,17866
- blue, hardness, factors affecting, 14023
- photoperiodism in,17708
- seed, apparatus for obtaining pure samples and for germination tests,2953
- blue stem, for fattening cattle,9804
- breeding,6493
- buffalo. (See *Buchloe dactyloides*.)
- carotene in, extraction method,15787
- carpet. (See *Axonopus affinis*.)
- chemical comp., fertilizer as affecting,10202
- clipping, effect on:
- bluestem yield in pasture and prairie,12601
- density and yield of black grama and tobosa grass,12583
- stored nutrients in *Andropogon*,7189
- Colletotrichum graminicolum* on,15889
- comp. and feed value, at various seasons,1204
- as crop, management and value,10181
- in Natal,10186
- culture and value for hay, Tenn.,1193
- for dairy pastures, S. Africa,15546
- digestibility, factors determining, 17595
- Dothichloe limitata* on,13732
- dried, effect on winter milk,13359
- emergence from soil, soil type as affecting,2951
- fertilizers for, Pa.,15571
- forage, introduction and breeding, Germany,6484
- susceptibility to *Tilletia* spp.,15847
- to *Ustilago* spp.,14073
- grease. (See *Melinis minutiflora*.)
- of Great Britain, book,11857
- of Hawaii, monograph,15490
- as hosts of Hessian fly,17872
- of India, common names and forage value,10192
- inflorescence, development and symmetry,15526
- Johnson, natural cross,1149
- juice factor, rations for study, guinea pigs,7463
- Kentucky blue, roots and root hairs,9012
- lalang. (See *Imperata arundinacea*.)
- methods of curing,13352
- Napier. (See *Pennisetum purpureum*.)
- N content, N fertilizers as affecting,15557
- osmotic pressure in leaves, factors affecting,13996
- perennial forage, cutting as affecting,11943
- phylogeny,1121
- pollens, antigenic relationships, by Dale test,15142
- serological specificity,11557
- of prairie root systems, vol. and wt. in relation to climate,16265
- protein content, N as affecting,17579
- protein feed value, drying method as affecting,8066
- quack, yield and protein content, fertilizer as affecting,8460
- for range grazing, southern and central Great Plains,6483
- in rehabilitation of abandoned crop lands,126
- reseeding practices, Colorado,15559
- roots, cell growth and differentiation in,17560
- seed dormancy, light and KSCN as affecting,6587
- seed germination, scarification as affecting,10312
- silage, criteria of value,13350
- methods of making,6478
- from thermophilous lactic fermentation,6262
- somatic chromosome complements,10718
- spp. susceptible to grasshopper damage,10191
- stomatal index, presence of trees as affecting,9027
- Grass (continued)
- succession on abandoned farm lands, Nebraska,10783
- sudan, as feed for dairy cattle,1195
- HCN content, factors affecting, 1177
- survival when grazed, starch reserves in roots and,17597
- wheat, crested. (See *Agropyron cristatum*.)
- winter, management, Gt. Britain,6462
- yield and consumption,11942
- yield and root development, cutting frequency and length of stubble as affecting,6490
- Grass mealbug. (See *Antonia indica*.)
- Grasshopper(s). (See also under genera, e.g., *Melanoplus*.)
- aspergillosis, temp. and humidity as affecting,10450
- attacked by *Empusa*, Okla.,10457
- damage to cereals and relation to rusts, N. Dak.,17877
- eggs, survival, predators and,15928
- eye, dark-adapted, response to light,4002
- flight capacity, measure,14275
- flight records,3365
- grass spp. susceptible to damage by,10191
- outbreaks, in Iowa, history,1493
- in Saskatchewan,1496
- in S. Dakota, factors controlling,1498
- in western Canada,8982
- plague. (See *Chortiocetes*.)
- Grassland. (See also *Grass*(es); *Grazing*; *Meadow*; *Pasture*; *Steppe*; etc.)
- analysis, percentage area detns.,132
- animal communities,15904
- bluestem yield, clipping as affecting, quadrat study,12601
- drought as affecting,5369
- ecology, and management,6493
- of meadows and pastures,15904
- in relation to burning and grazing,9014
- evaporation rate, Iowa,12566
- forests, tension zone in Nilgiris, India, factors affecting,9009
- Great Britain,4829
- hay, vit. D in, utilization by dairy cow,17086
- held by North American universities,16130
- in Hungary,7202
- injury due to June beetle, Finland,12201
- insect pests of meadows and pastures, book,15904
- management and uses, Internat. Congress,6493
- Nebraska,10783
- of Nilgiris plateau, ecology,9028
- of N. Amer., concept of biome in relation to,10751
- predator-prey relationships, Kansas,5378
- soil type and fungal spp.,5389
- types, of west central Kansas,115
- underground plant material in relation to climate, and soil building,16265
- water economy and growth of upland prairie,120
- white clover in, factors affecting, 10180
- Grateloupia* (p.1860⁴), n. spp.,4729
- Grateloupiaceae* (Algae), p.1860⁴
- Grave's disease. (See *Goulet, exophthalmic*.)
- Gravitol, effect on carotid sinus reflexes,2296
- Gravity. (See *geotropism* under *Tropisms*.)
- Grazing. (See also *Forage crops*; *Grasses*; *Grassland*; *Pasture*.)
- beef cattle on range, rate of stocking, value of supplements,15099
- capacity, of Wyoming desert, measurement,4851
- vs. clipping on ranges,12583
- control, in relation to soil erosion problem, India,9015
- 9081
- effect on:
- grassland succession,9014
- prairie vegetation,115
- vegetation types in India,10778
- of horses, strongylosis and,17890
- night vs. day, effect on winter grass,6462
- over, effects in India,9015
- in relation to land utilization, ecology, and soil erosion, Africa,9082
- Grebes. (See *Colymbidae*.)

Green manure. (See under *Manure*.)
 Greenhouse, construction and types, book, 6516
 control of cricket, 14114
 fumigation with β, β' -dichloroethyl ether to control insect pests, 1501
 heating and lighting, with intermittent light, 1225
 plant disease control in, 1468
 temp. regulation, air conditioning apparatus for, 5371
Gregarina (p.1868⁴), new spp., 6766
 12287
 valetti, in barnacles, 6766
Gregarine, in centipedes, 12288
 India, 6761
 in gut of barnacles, Puget Sound, 6766
 in intestine of crab, 10518
 schizo-, in mecopteran insect, 10524
 in silverfish, 12287
Gregarinida (Protozoa), p.1868⁴
Gregarinidae (Protozoa), p.1868⁴
Grevillea (p.1865²), n. spp., 11883
Grewia (p.1866²), n. spp. and n. combs., 15498
Grimmia (p.1863³), n. vars., 6369
Grimmiaceae (Bryophyta), p.1863³
Grindelia, grass morphology, 2885
 Grinding tools, for preparing otoliths, 6958
Griphoneura (p.1877⁴), n. sp., 6895
 Grippe. (See *Influenza*.)
 Griseofulvin, from *Penicillium griseofulvum*, isolation and structure, 3596
Gromia (p.1868³) *dujardini*, gametes, 6774
Gromiidae (Protozoa), p.1868³
Gronophyllum (p.1864⁴) tax., 11864, 15488
Grossularia divaricata, *Puccinia parkeri* on, 6357
 Ground fauna, method for quantitative study, 5373
 Groundhog. (See *Marmota monax*.)
 Ground nut. (See *Peanut*.)
 Ground squirrel. (See *Callospermophilus citellus*.)
 Grouse, eggs, artificial incubation, 14437
 Eimeria in, 14202
 red. (See *Lagopus scoticus*.)
 ruffed. (See *Bonasa umbellus*.)
 in Sakhalin, habits, 16105
 Growth. (See also *Cell division*; *Development*; *Diet*; *Differentiation*; *Meristem*; *Metabolism*; *Metamorphosis*; *Mitosis*; *Morphogenesis*; *Nutrition*; *Regeneration*; *Vitamins*; etc.)
 accelerators. (See also *Bios*; *Hormones*; *plant*; *Pantothenic acid*; *Thiamin*; *Vitamins*.)
 aneurin and biotin as, for fungus, 4736
 chem. and action, 5551
 compounds as, use in vapor form, 17688
 indole-acetic acid as, effect on plant tumors, 6666
 -inhibitor substance, in protozoan cultures, 5103
 in injured tissue, 2041, 2042
 from mycorrhiza fungi, effect on growth of coniferous plants, 16259
 production in cultures of *Phytomonas tumefaciens*, 3169
 for protozoa, 4714
 pyrimidines as, for flagellates, 1582
 review, 14440
 Rhizobium forming, 6295, 17489
 Rhizobium requirements, 8351
 in root nodule formation, 17489
 Scharlach red as, 10364
 synthetic, effect on rooting of ornamentals, application methods compared, 15706
 of bacteria. (See *Bacteria*.)
 concept, 2052
 constants, dimensions and interrelationship, 16497
 and genetics, in domestic fowl, 95
 development and regeneration, review, 12831
 energetic efficiency and, 7398
 factor, chondroitin, study, 12648
 laws, mathematical, 9210
 mathematical equation for, 9208
 natural increase, 9205
 rates, comparison, 1815
 logarithmic equations, 2039
 review, 7244
 substances, for microorganisms, review, 17458

Growth (continued)
 in tissue cultures. (See *Tissue cultures*.)
 of tumors. (See *Tumors*.)
 animal, of capillaries, factors affecting, 7940
 cause of increase during pregnancy, rat, 11103
 of cod, formula for, 5404
 curves, of *Blattella germanica*, 12833
 of insects, 9214
 of pigs, 3707
 Daphnia magna, study, 14553
 developmental, as influenced by:
 adenine, *Obelia*, 2045
 hypoxanthine, *Obelia*, 2046
 xanthine, 2047
 differential, evolution in subterranean isopod and, 16498
 factors, chondroitin sulfuric acid as, chick and rat, 3705
 w, rats, 7468
 formula, similarity to equations for excitation and recovery in central nervous system, 16693
 as influenced by:
 ant. pituitary extracts, *Amblystoma*, rat, 3806
 atmospheric environment, 3668
 cecectomy, chicks, 17909
 cystine and lysine deficiency, 14530
 deuterium oxide, mice, 5548
 dietary deficiencies, 2049
 electrical insulation from earth, 3710
 factors, trout, 16466
 hypophysectomy, dog, 3810
 local variation, *Meretrix*, 3706
 methylcholanthrene, rats, 3681
 a-N-methylated lysines, rat, 5536
 optical isomerism of tryptophane, histidine and lysine, 5537
 protein concentrates, fowl, 6014
 protein in diet, rat, 10951, 16465
 refeeding after period of inhibition, 3708
 secretion of pituitary stalk, rat, 3930
 l-serine, *Obelia*, 9207
 substance in tonsils, 12786
 sunlight, 775
 tapeworm infestation, chickens, 17898
 temp., larvae of *Deilephila*, 12779
 thymectomy or thymus extract, rat, 3804, 3805
 thyroid feeding and KI, guinea pig, 9211
 thyroparathyroidectomy, rat, 8908
 d-valine, *Obelia*, 9208
 vit. B factor W, 12838
 laws of *Daphnia magna*, 10994
 mineral, calculations, 2048
 during molting, *Callinectes*, 9206
 of *Mytilus*, in relation to salt content of water, 12581
 rates, of body parts of smallmouth bass, 18043
 of *Chthamalus*, factors affecting, 10796
 of organs vs. body, 7465
 of parts, blue crab, 2043
 of water and dry substance in fetus, rat, 2044
 of white mouse, 14556
 ratio of tarsometatarsus, fowl, 2050
 requirements, of *Trichomonadinae*, 14166
 on restricted diets, rats, 14554
 retarded, chemical and pathol. changes in aging and, rat, 14555
 stimulation, S compounds and, 9209
 vit. E requirement for, rat, 12367
 of wing-sheets of *Eusthenia*, 3364
 human, of children, bananas as affecting, 16824
 of Bengalee school boys, 5922
 in first year of infancy, 559
 of infants in Batavia, 4177
 periods of accelerated and retarded, 9750
 pre-school, Ca and, 11268
 relation to obesity, 16819
 from 8 months to 13 years, analysis, 564
 of Eurafican and European juvenile adults, 17020
 of head in some individuals, 17014
 as influenced by ecological milieu, 5365
 statistics of Univ. freshmen, 3709

Growth (continued)
 plant, of *Avena* coleoptiles, relation to protoplasmic streaming, 1356
 of Bengal trees, 10281
 cellular and tissue, in elongating region of grass roots, 17560
 of cereals, correlated with carotenoid content of leaves, 8576
 chamber, at controlled temp., 17741
 changes in cytonuclear ratio during, 17708
 critical period in trees, 10753
 of East Indian and European trees, 3020
 of embryos, factors affecting, 3088
 S. Africa, 4926, 14006
 of fruit trees, Australia, 1226
 of fungi on different substrata, interpretation, 17704
 factors affecting, 12065, 14003, 15727
 of gladiolus corms, relation to corm characters, 8498
 habits, polyploidy as affecting, *Deschampsia*, *Ara*, 14345
 of timothy in relation to latitude, 8981
 of hydrophytes, 1871
 of hypocotyl cells, *Helianthus*, 1370
 as influenced by:
 alkali ions, *Chlorella*, 12058
 clipping tops, alfalfa, 17701
 Co, Ni, and Cu, 1407
 deuterium oxide, *Chlorella*, 1375
 dibenzanthracene, *Fusarium lini*, 15727
 ethylene, 1367
 flue dust, beans and sunflowers, 4910
 hormones, algae, 15705
 applied in spray or water, 15717
 pea test for, 17687
 hormone dust, when applied to seed, winter wheat, 12070
 indoleacetic acid, bean cuttings, buds, 10304
 crop plants, 13986
 irradiation, wheat, 17714
 Mn and S, diatoms, 12077
 temp., asparagus stems, 14002
 thiamin and dextrose, *Phycomyces*, 14003
 trace elements, 6562
 water date fruit and leaves, 13897
 wounds, fruits, 12079
 x-rays, *Apocynum*, 1387
 wheat, 1385
 Zn, *Rhizopus*, 12061
 inhibited by hormones, 17679, 17686
 by methyl ester of naphthalene, acetic acid, potato tubers, 12066
 by organic acids, seedlings, 15730
 by radish extract, 15716
 of leaves, *Hedera helix*, 1376
 of meristems, relation to polymerization of proteins, 1273
 moisture optima for, 12587
 movement. (See also *Movement*; *Tropisms*.)
 of mycorrhiza, aneurin and biotin as affecting, 12078
 periodicity. (See *Periodicity*; *Photoperiodism*; *Tropism*.)
 of potatoes, factors affecting, 8473
 12066, 13813
 rate, of corn and sorghum, relation to size of seed, 2921
 inheritance, in *Neurospora crassa*, 5313
 of pineapple fruit, kinetics, 6592
 relation to cracking of fruit, apple, 3007
 role of thiamin etc. in, 17702
 of roots, factors affecting, 4925
 6575, 6576, 12063, 15734
 17679, 17706, 17707, 17715
 of root hairs, factors affecting, 8565
 of seedlings, factors affecting, 10320, 14012, 15780
 SH conc. related to, *Phaseolus*, 10314
 spiral, mechanism, *Phycomyces*, 15731
 straight and curved in *Avena*, various compounds as affecting, 17678
 substances that retard and accelerate, from fruits and seeds, 13897
 of yeast, N excretion during, 1397
 Gruber-Widal test, greasy, acid and alkaline tubes as affecting, 17348
 for typhoid, interpretation, 836
 typhoid-paratyphoid strains eliminating coagglutination in, 793

SUBJECT INDEX

Gruidae-Hair (animal)

Gruidae, trachea, type, taxonomic significance, 705
 Gruiformes (Aves), p.1881²
 Gryllidae (Orthoptera), p.1875¹
Gryllotalpa (p.1875¹). (See also *Mole cricket*.)
 bait for, 3210
 africana, supernumerary chromosomes, 7119
Gryllus (p.1875¹) *assimilis*, on cotton, life history and control, Louisiana, 5027
Gryphea (p.1872¹) *angulata*, life history and culture, book, 14406
 Guaiac, ingestion, effects, 2309
 Guaiacol, expectorant action, 5758
 as membrane, movement of water through, 174
 Guanidine, effect on:
 amphibian lymphatic hearts, 16735
 autonomic nervous system, 7785
 blood choline-esterase activity, 14458
 myotonia, goat, 2312
 methyl, secretin-like action, 3851
 poisoning, plasma loss in, factors affecting, 7785, 7786
 Guanine, effect on blood sugar, 12756
 on developmental growth, *Obelia*, 9785
 occurrence and metabolism in animal kingdom, 12809
 Guano, sterols in, 8487
 Guanilic acid, deamination by kidney tissue, cholic acid as affecting, 13022
 effect on blood sugar, 12756
 Guanylyurea, fertilizing value, 17430
Guatteria (p.1865³), n. sp., 2865
Guettarda (p.1867³), n. spp., 6429, 6437
Guignardia, latent infection of tropical fruits due to, 8599
 Guinea-fowl. (See also *Numida*.)
 Capillaria lesions in, 12263
 Guinea pig. (See also *Cavia*.)
 ansa of Wrisberg, connections, 681
 Ascaris infestation of lungs, exptl. studies, 14186
 blood collection apparatus, 8274
 blood-group relations, 2595
 Brucella abortus inoculations, 2710
 coat color, of different areas, 12542
 distr. of black and yellow in tricolor, 12543
 quantitative study of genic effects, 8957
 diaphragm development, 8037
 dietary requirements, special factor in, 16499
 dog *Strongyloides* uninfected to, 10479
 endocrine glands hist., vit. E as affecting, 5937
 epidemic in controlled colony, 17391
 exptl. *Dicrocoelium* infection in, 14133
 exptl. *Trypanosoma evansi* in, 12259
 germ cells, development, 17088
 helminth toxins as affecting, 14177
 induced immunity to *Cochliomyia* larvae, 14179
 inheritance of internal organ differences, 14374
 interstitial cells of testis, factors affecting, 694
 intestinal infection and immunization, 898
 kidney, vascular supply, degenerating glomeruli and, 13294
 limb bone measurements, factors affecting, 9673
 liver cells, mitosis, 4356
 lungs, blood-perfused, observations, 3775
 lymphatic system, anatomy, 4321
 lymphocytes, types, 11322
 M-antibodies formed by, 2597
 omentum, response to drugs, 4355
 ovum, development, cytoplasmic components, 2466
 delayed fertilization as affecting, 8043
 in vitro, 8043
 paratyphoid spread by rats to, 2709
 peripheral nerve fibre, myelination, 13299
 physiological genetics of hair and skin color by dopa reaction, 14373
 pigments in hair of different genetic strains, 16203
 pituitary, lactogenic content during growth, 12959
 psoas fascia, fibroma in, 4208
 reproductive system in ♂♂, postnatal development, 13048

Guinea pig (*continued*)
 respiratory infection and immunization, 898
 respiratory metabolism in vit. C lack, 5568
 response to castrate urine preps., 5624, 5625
 sexual behavior, 7604
 small intestine, wandering lymphocytes in, hist., 15040
 striated muscle, glycogen localization in, 4861
 submaxillary-gland virus, pathogenicity and cytological reactions, 13579
 susceptibility to exptl. trichinosis, 12267
 thymus structure, thyroidine as affecting, 13303
 thyro-arytenoid muscle, insertion, 13312
 thyroid, nuclear, cytoplasmatic, and colloid pH, 16986
 structure after thyreotropic hormones, vit. C as affecting, 11414
 wt., assay of thyrotropin and, 14607
 toxin reactions of spp. and strains compared, 4513
 transplants of pigmented skin to defective white skin areas, 14996
 virus disease, 2635
 water retention, pituitrin as affecting, 14610
 Guinea worm. (See *Dracunculus*.)
Gulaphallus (p.1879²) *mirabilis*, anatomy of, 6972
 Gull(s), herring. (See *Larus argentatus*.)
 Pacific, banding project, 5207
 psittacosis in, 3280
Gulo luscus, adult *Taenia* in, 1564
Gulubia (p.1864⁴), n. vars., 10121
 Gum, formation in sugarcane, after freezing, 17578
 of Sumatran *Pinus* spp., analyses, 4906
 Gum(s), of mouth. (See *Gingiva*.)
 Gummosis, of cherry, microchemical study, 3169
Gunnera magellanica, *Ustilago* on, 11831
 Guppy, sex linkage, 3466
Gurania (p.1867³), n. sp., 6437
 Gurwitsch rays. (See *Mitogenetic rays*.)
 Gustation. (See *Taste*.)
 Guttation. (See also *Bleeding (plant)*; *Hydathodes*.)
 factors determining, 8578
 Guttiferae (Dicotyledones), p.1866²
 Guvacoline, effect on intestine, 16810
Guastioa (p.1871¹), syn., 17962
 Gymnascales (Fungi), p.1861⁸
Gymnodactylus (p.1880³) *kotschy*, subsp. of, 6988
Gymnodia (p.1877¹), n. sp., 6895
Gymnodinium spp., structure, reproduction, and nutrition in, 8715
Gymnoglossa (Mollusca), p.1872²
Gymnomera (Crustacea), p.1873²
Gymnopleura (Crustacea), p.1874²
Gymnopogon ambiguus, *Dothichloe* on, 13732
Gymnopus (p.1862³), n. spp., 4737, 8403
Gymnosarda pelamisi, *Capella* from, 10544
Gymnospermae, p.1864⁴. (See also *Conifers*.)
Gymnosporangium (p.1862²), on apple, comparative symptoms and morphology, 17754
 varietal resistance tests, 8141
 3169, 17755
 clavipes, on apple environmental relations, 15890
Gymnosporia (p.1866⁴), n. vars., 15504
Gymnostomina (Protozoa), p.1868²
Gymnostomum (p.1863²), transfers from, 4748
 Gynandromorphism. (See also *Hermaphroditism*; *Sex, intergrades*; *Mosaics*; *Sex, reversal*.)
 and lateral asymmetry in birds, 7113
 pseudo, in fowl, 8955
 in spiders, 3317
Gynandropsis (p.1865³) *pentaphylla*, pro-chromosomes, 3449
Gyneceum, development in *Salix*, 1169
 morph. in *Papaveraceae*, 15521
 Gynecology, obstetrics and, 7593, 13029
 Gynergen. (See *Ergotamin*.)
 Gynoecium. (See *Carpel*; *Flower*; *Fruit (morphological)*; *Ovule*; *Pistil*.)
 Gypsy moth. (See also *Porthetria dispar*.)
 control, 1505
 distr., in U.S.A., 1937, 1454
Gyrinus urinator, eyes, 16033
 Gyrodactylidae (Platyhelminthes), p.1870³
Gyrophana (p.1862²) *lachrymans*, anatomy of strands, 8400
Gyroporus (p.1862²), n. sp., 4737
Gyrovetsia tenuis, in N. America, 4753

H

Habenaria (p.1865²) *camptoceras*, *Orchis constricta* syn. of, 2842
 Habit(s). (See *Behavior*; *Reflexes, conditioned*.)
Habrobracon (p.1873²), diffusible eye color substances of, compared with those of *Drosophila* and *Ephesia*, 1760
 eye pigmentation, review, 12540
 inheritance of mutant body colors, 3468
 sex determination, compared with *Pteromalus*, 8950
 x-ray-induced dominant and recessive lethal genes, 1784
juglandis, puncture of eggs as cause of sterility, 3353
 temperature effect on eye color, 1764
Habronema microstoma, incidence and pathology, equines, 15950
 Hackberry, fruit, Ca content, 8516
 Haddock. (See also *Melanogrammus*.)
 chemical comp., seasonal variation, 10086
 distr. in relation to wind conditions, 143
 food of, stomach analysis, 150
 growth rate, 1858
 muscle, decomposition, temp. as affecting, 2721
 electrometric titration, 10040
 smoke-cured, freezing and cold storage, 10033
 spoilage, in ice storage, 10055
 Hadeninae (Lepidoptera), p.1877¹
Hadropterus (p.1880²) *maculatus*, breeding habits, 3386
 oxyrhynchus, from Virginia and West Virginia, 6957
Hadrosauridae (p.1880⁴), proboscis-bearing forms, discussion, 14291
 HADROSPORIUM (Fungi) (p.1863⁴) *fraserianum*, 8407
 Haecker, Theophilus Levi, biography, 7077
 Haem. (For subject words beginning Haem. see *Hem.*, e.g., *Hemoglobin*, etc.)
Haemagogus capricorni, yellow fever virus in, 13581
Haemaphysalis, as vector of nuttalliosis, 6756
 leachi, as vector of typhus, 8291
 leporis-palustris, acquired immunity to, 5065
 on varying hare, 1564
 Haematomyzidae (Anoplura), p.1875²
Haematomyzus (p.1875²) *elephantis*, biol. and tax., 12416
 new head organ, 8802
Haematotrema (p.1870¹), syn., 6788
Haematotrephus (p.1870¹) *jodensis* (*Diasia*), *Amphimerus lintoni* segregated from, 17931
 Haemonchosis. (See *Haemonchus*.)
Haemonchus (p.1870³), in *Hydropotes*, 1604
 immunity to, nature and mechanism, 15176
 in lambs, nutrition as affecting, 6728
 contortus, in calves, control, 1562
 in sheep, 5091, 6717
Haemopsis grandis, chromaffin nerve cell, nature, 5970
 Haemoproteidae (Protozoa), p.1868⁴
Haemoproteus (p.1868⁴), new spp., 3257
 in birds, vector, diagnosis, and control, 6733
 incidence, wild birds, 17901
 Haemosporidia (Protozoa), p.1868⁴
 of rodents, 6769
 Haenke, redescription of ferns collected by, 1097
 Hail. (See also *Precipitation*.)
 injury, to pear fruits, 17796
 to trees, 10241
 Hair (animal). (See also *Fibers*; *Textiles*; *Wool*.)
 amino acid comp., 7977
 arrangement of fiber follicles in mammals, 13286
 balls, comp., 16558
 color, androgens as affecting, castrated men, 12643
 classification, 15058
 and different areas of coat, guinea pig, 12542
 distr. of black and yellow in tricolor guinea pig, 12543
 lead content and, 10989
 pattern variation in, developmental significance, 1762
 physiological genetics, guinea pig, 14373
 pigments and, 11422

Hair (animal)(continued)

- color (continued)
 in pinto horse, 92
 vit. B complex as affecting, rat, 12344
 in wood rat, humidity as affecting, 7046
 coronal scales, structure in mammals, 15032
 curley, types and factors determining, 11421
 cuticular-scale pattern, monotremata, 7979
 deficiency, hereditary, *Peromyscus*, 12544
 growth, body size and quantity of food as affecting, 7460
 in hairless rat after haired transplants, 9699
 hypernephroma as affecting, 9654
 head whorl in Bengalis, 5921
 keratin from, sp. specificity, 4346
 loss, factors affecting, rat, 13145
 of mammalian spp., identification, 18091
 roots, 15031
 temp. as affecting, mice, 14694
 urticating, 8650
 Zn content, 7978
 Hair(s) (plant). (See also *Cotton*; *Fibers*; etc.)
 Hairworm, on rice caseworm larvae, Philippines, 5039
Haleyon (p.1881⁴), n. spp., 7013
Haleya (p.1866⁴), n. sp., 2882
Haliaeura (p.1881⁴), food habits, 9064
albicilla, in France, 8828
 Halibut, intestinal oil, vit. A in, 11002
 tagging expts., 3533
Halichoerus (p.1883²) *grypus*, life history, 5247
Haliectus (p.1878⁴), n. spp., 6920
 6921, 14265
Halicyclops (p.1878³) *rotundipes*, anatomical notes, 8753
Halicystis, bioelectric potentials in, O₂ as affecting, 3095
 electric potentials in, non-electrolytes as affecting, 4923
 mobility of ions in protoplasmic surface, guaiacol as affecting, 3076
osterhoutii, accumulation of nitrate in cell sap, 3071
 permeability to water, measurement, 15725
Halipectus (p.1869⁴) *eccentricus*, 12301
fusiporus, in *Amphiuma*, 6716
Haliaraca (p.1869¹) *lobularis*, development, 9792
 Halisarcidae (Porifera), p.1869¹
 Hall, Maurice Crowther, biography, 16147
Hallia (p.1869³), n. sp. (D), 10535
 Hallopididae (Reptilia), p.1880⁴
Hallopus (p.1880⁴), horizon corrected, 5165
 Halogen(s). (See specific halogens, e.g., Bromine, Chlorine.)
 Halophytes. (See also *Littoral*; *Marsh*; *Vegetation*.)
 photosynthesis, 1842, 12082
 root suction force vs. soil suction force, 12582
 Halorrhagidaceae (Dicotyledones), p.1866⁴
Halosydna (p.1871⁴), syn., 17962
 HALOSYDNELLA (Annel.) (p.1871⁴), n. spp., 6813
Halotydeus destructor, ecology, 1832
Halteria (p.1868³) *grandinella*, crystalline inclusions, 3254
 Halteriidae (Protozoa), p.1868³
 Hamamelidaceae (Dicotyledones), p.1865⁴
 Hamster(s). (See also *Orctacus*.)
 golden, *Mycobacterium* susceptibility, 17297
 isolation of *Leishmania* from tissues, 5085
 uterine control of ovary during pregnancy, 11106
 Hand. (See also *Digits*; *Handedness*; *Nails*.)
 autoanastomosis of nerves in, 680
 congenital malformation, man, 12559
 dorsal interosseus muscles, embryol. anatomy, opossum, 4311
 dorsum, cancer, solar irradiation and, 9597
 Dupuytren's contraction, in up holsters, 7926
 prints. (See *Dermatoglyphics*.)
 short tendons, inheritance, man, 12558
 skin temp. measurement, 697
 surgical infections, chemotherapy, 4554
 thenar pattern, inheritance, 8028
 types, measurements, 8024
 volar arch, blood pressure, measurement, 11180
 Handbuch der biologischen Arbeitsmethoden, index, 12488
 Handedness, cerebral destruction as affecting, rat, 3984
 in twins, 8008
 Hapalidae, taurodontism in, 11439
Hapalopilus (p.1862³), new species, 6353
Hapalorhynchus (p.1870³), tax., 6788
Haplosiphon (p.1860³), n. sp., 8385
Hapalosphaeria deformans, stamen blight of blackberry due to, 17762
Hapalotrema (p.1870³), syn., 6788
Haplaria (p.1863³), n. sp., 17487
Haplocnemus (p.1876³), n. sp., 3332
Haploconus (p.1883³), n. sp. (E), 18094
 Haploid, Haploidy. (See *Chromosomes*; *Diploidy*; *Polyploidy*.)
 Haplomi (Pisces), p.1879³
Haploppappus (p.1867⁴), n. syn., 1158
Haploparaxis (p.1870⁴) *linstowi*, 1593
Haplophthaimus (p.1873⁴), eye structure of blind spp., 5126
Haplophyllum tuberculatum, root system, 10780
 Haplosclerina (Porifera), p.1869¹
Haplosporella (p.1862⁴), n. sp., 15453
Haptophrya (p.1868³) *virginianis*, in intestine of pickerel frog, 10527
 Hardiness, of alfalfa, sugar content and, 15772
 in USSR, variety tests, 13843
 of bluegrass, factors affecting, 14023
 of cabbage, water content as affecting, 15773
 of citrus fruits, relation to soluble solids present, 15584
 of conifer needles, factors affecting, 14025
 water content and carbohydrates related to, 3086
 of English walnuts, Carpathian var., 2989
 of fruit-tree stocks, Poland, 3014
 of moss cells, water content as affecting, 1402
 of ornamentals, relation to transpiration, 15746
 of peach rootstocks, length as affecting, 13864
 of peach twigs, N and P content related to, 14027
 of pears, in storage, 6513
 of plants cells, factors affecting, 4946
 in liquid air, plasmolysis as affecting, 3087
 relation to water content, 1401
 of plants, variations and causes, 6609
 of strawberries, Ohio vars., 8500
 of vegetables, relation to vars. grown in given locality, 2990
 of walnut vars., England, 8513
 of wheat, factors affecting, 15771
 relation to earliness, 17596
 winter, factors affecting, 14026
 Harengula (p.1879⁴) *cultiventris* and *delicula* synonyms, 3387
 Hares. (See also *Lepus*.)
 diseases, 6243, 6249
 parasite and disease survey, Alaska, 4681
 respiratory system, anatomy, 4315
 snowshoe, melanism in, 7037
 varying, parasites, Alaska, 1564
 Harmin, as alkaloid of *Banisteria caapi*, 14796
Harmothoe (p.1871³), n. comb. in, 1606
 Harpacticoida (Crustacea), p.1873²
 Harpagophoridae (Myriopoda), p.1878²
Harpagosaurus (p.1880³) (f) *silberlingii*, 3404
Harrovia (p.1874³), tax., 1616
Hasseltia (p.1866³), n. sp., 2881
 HASSELTIOFIS (Dicot.) (p.1866³), 2881
 Hatchability. (See *Egg(s)*, *poultry*.)
 Hatchery(ies). (See *Fisheries*.)
 Hatching. (See also *Eggs*.)
 of *Leptodaphne*, low temp. as affecting, 3983
 Haustoriidae (Crustacea), p.1874¹
 Haustorium(a), differential staining in fresh leaves, 15891
 Hawk(s). (See also *Accipitridae*; *Falconidae*.)
 hen-harrier (*Circus*), nesting habits, 14292
 as predators on quail, 5414
 sparrow, European, nesting habit, 5177
Haworthia spp., notes, 2849, 2850
Hawthorn, *Eriocoma* spp. on, 17855
 Hay. (See also *Feeds*; *Forage*; *Grasses*; *Grassland*; *Meadow*; *Pasture*; etc.; and especially under hay plants, e.g., *Alfalfa*, *Clover*.)
 changes in comp. during curing, fertilizers as affecting, 1209
 curing, methods and factors affecting, alfalfa, 8464
 legume and corn, as feeds for beef cattle, 5981
 peanut, for beef cattle, 777
 role in licking disease of ruminants, 17389
 use of forage plants in, Tenn., 1193
 vit. B₁ in different qualities, 17070
 Hay bacillus. (See *Bacillus subtilis*; *Mycobacterium phlei*.)
 Hay-fever. (See also *Allergy*.)
 allergy to pine pollen, 15160
 antigen volume vs. absorption rate, 9828
 antigenic relationships of pollens by Dale test, 15142
 beet pollen and seed dust causing, 6047
 blocking substance formation by pollen treatment, 6068
 cholesterol of serum in, 6028
 coincident skin reactions to pollens in, statistics and significance, 15145
 immunization, by dried immune serum, 6068
 lyophile serum in study and therapy, 6068
 pollen, in air, quantitative detn., 6033
 survey in relation to, in California, 9839
 predisposing factors, 2590
 ragweed, oral + subcutaneous therapy, 15148
 pollen extract, allergenic activity of protein vs. nonprotein fractions, 13493
 inactivated by adsorption and electric charge, 15128
 pollen orally administered, 17121
 pollen proteins, chemistry and immunology, 2542
 pollen skin-sensitizing antibodies passively transferable to man, 11566
 review, 18417
 specificity of grass pollens, 11557
 vacuum vs. pressure filtration pollen extracts, specific activities, 17140
 Haynaldia (p.1867³) *villosa*, resistant to Hessian fly, 17872
 Hazelnut. (See *Corylus*.)
 Head. (See also *Anthropometry*; *Chondrocranium*; *Craniometry*; *Man*; *Skull*; and under parts of head.)
 acrocephaly, inheritance, man, 14376
 direct current potentials during sleep, 5690
 growth in adult life, 2457
 in ♂♂ and ♀♀, 17014
 Health. (See also *Hygiene*; *Industrial hygiene*; *Sanitation*.)
 Conference, National (U. S. A.), recommendations, 8279
 decomposed halogenated hydrocarbons as affecting, 1359
 of eye, H₂S as affecting, 13284
 fluorosis and, Krawang, 13866
 industrial, hygiene program, 13865
 maintenance, 8306
 of negroes, in Arkansas delta area, 11716
 personal and community, book, 10028
 public, bacteriology, textbook, 15427
 books, 4655, 10028
 control of smoke, 14990
 defective irrigation and malaria, India, 10508
 development of government work for, survey, 8289
 disease control procedures, governmental, 15301
 engineering, in rural-urban areas, 15309
 exhibits and displays, prep., 14319
 laboratories, regulation in Conn., 6215
 mottled enamel, F in water and food and, 9669
 nursing, milestones (15-yr) in, 11683
 officers, duties, federal housing act relations, 8313
 organization, in Brazil, 13635
 population growth in relation to, 8309
 principles and application, book, 9902
 problems, cancer as, 9581, 13226
 in sub-tropics, 6723
 venereal diseases as, 11700
 programs, appraisal, 13657, 15343
 quarantine and fumigation for diseases brought in by shipping, 10013

rabies control program, Illinois, 15337
 records, integration, 15293
 sanitary control of food and drink
 dispensaries, 8299
 schistosomiasis therapy, S. Africa, 10484
 selenium problem, 14989
 sleeping sickness work, N. Nigeria, 8698
 social insurance and, 13655
 standards, development, 8289
 textbook, 15338
 trichinosis control, 6736, 14195
 vital statistics in relation to studies, 8284
 war-time services, 8289
 work, in China by Japanese, 17375
 development in Canada, 11678
 limitations in preventive medicine, 11679
 sulfur dioxide poisoning as cause of
 asthma, 13284
 in tea gardens, malaria and, Bengal, 15358
 toxicities of glycols and derivatives, 11863
 Hearing. (See also Acoustics; Deafness;
 Ear; Sound.)
 acuity, age and, 437
 cochlear mechanics, 2215
 electrophysiology, 2205
 as influenced by cobra venom and opi-
 ates, 12643
 by medial geniculate body lesions, 4007
 intensity, recording, 1946
 mechanism and masking effect of ther-
 mal noise, 2202
 pathways in rabbit and cat, 14202
 presbycusis, 437
 reaction of brain to auditory stimuli
 during sleep, 16690
 smallest interval between sounds per-
 ceptible by cat and rabbit, 14703
 sound perception-time curve, 11124
 theories, book, 5687
 threshold values, monauricular, mea-
 surement, 7635
 tone appreciation, fish, 14698
 Heart. (See also Blood pressure; Circula-
 tion; Circulatory system; Endocar-
 ditis; Myocarditis.)
 activity during artificial hyperpyrexia, 12643
 anatomy, elephant, 4322
 aneurism, clinical and x-ray findings, 1163
 angioreticuloendothelioma, study, 11279
 anomalies, congenital aneurysmal dilata-
 tion, 5967
 congenital dextrocardia with complete
 transportation of viscera, 9779
 interauricular septum defects, 763
 patent foramen ovale in sheep, 17054
 apex, rotary movements, study, 13111
 auricle, left, rhythmicity and automa-
 tism, 7726
 level, venous pressure and, 4086
 Purkinje tissue in, 9687
 autohormone, study, 16809
 block, bundle branch, 4093, 11164
 intraventricular, 16736
 metrazol treatment, 2317
 partial, digitalis in, 16723
 blood stasis in, after brain implanted
 tumors, 16883
 cardiodynamic studies, circulation equi-
 librium and, 4067
 cartilaginous foci, rats, 9520
 chambers, visualization, in pulmonary
 heart disease, 14775
 chronaxia, vagal inhibition and, 14759
 of cockroach, mechanocardiogram, 14288
 conduction from A-V node, study, 4074
 mammals, 11183
 supernormal, in heart block, 12643
 configuration in young athletes, 12643
 contraction, comparison of 8 and 4
 chambered hearts, 484
 short waves as affecting, rabbit, 14464
 contusion, study, 11199
 coronary circulation. (See under Circu-
 lation.)
 coronary vessels. (See also Blood
 vessels.)
 aneurysm, 2273
 blood flow and differential pressure
 in, 12643
 lung emboli as affecting, 4061

Heart (continued)
 coronary vessels (continued)
 blood flow (continued)
 in right and left arteries, drugs as
 affecting, 12643
 disease, autopsy analysis, 4068
 as influenced by:
 anaphylaxis and histamine, 7702
 coramine, 9572
 ephedrine, 539
 innervation, 11139
 occlusion, collateral blood flow,
 gradual, method for, 12643, 14760
 study, 16733
 temp. as affecting, 4057
 perfusion apparatus, 5496
 phasic blood flow direct measurement,
 12643
 volume, aortic pressures as affecting,
 7721
 cycle, in Valsalva expt., 13185
 diameter, insulin shock as affecting,
 9526
 transverse, teleoroentgenography and,
 4097
 diseases, acute interstitial myocarditis,
 hist., 14732
 alcohol tolerance test in, 8747
 aortic dissecting aneurism, medial
 degeneration, 14777
 blood lactic acid after exercise, 13116
 circulatory stasis and blood vol. in,
 16437
 climatic and socio-economic factors, 995
 exptl. acetylcholine and, 9518
 in general practice, 7710
 history, 5273
 mortality trends, 11702, 11297
 O₂ consumption in, 2275
 rheumatic, chronic, leucocyte count
 and, 13119
 tonsillectomy as affecting, 617
 sedimentation test and formol-gel
 reaction, 7784
 unknown origin, study, 14755
 vital capacity and, 14595
 xanthomata and, 2274
 diseased, economy of effort, detn., 9536
 fibrillating, epinephrine as affecting,
 16730
 metabolism, detn., 9530
 electrocardiogram, absent initial posi-
 tive deflections, 9533
 in angina pectoris, diagnostic fea-
 tures, 7732
 in anoxemia, coronary insufficiency
 and, 4083
 in calcareous stenosis of aortic valve,
 14757
 in cardiazol therapy in schizophrenia,
 14774
 chest leads, in coronary occlusion, 4064
 consecutive, differences, 7729
 in coronary thrombosis, 5716
 in crawfish, 11201
 in diagnosis of adhesive pericardio-
 mediastinitis, 482
 of elephant, 4098
 in heart lesions, pre-operative value,
 2279
 in infarction of right auricle, 14764
 as influenced by:
 adenosine, 2270
 alkalosis and acidosis, 5709
 anoxemia, 16737
 bath, 2272
 Ca gluconate, 16750
 cigarette smoking, 549
 conductivity of tissues, 7716
 coumagine, dog and cat, 11235
 digitoxin, 4102
 epinephrin, autonomic drugs and,
 7736
 after denervation, 7735
 hyperthyroid rabbit, 7737
 extract of *Gelsemium*, 11238
 food, 13112
 hypoglycemia and anoxemia, 9486
 intravenous CaCl₂, 4078
 low atmospheric pressure, 479
 Mg intravenously, 13133
 potassium, 506
 pregnancies, 502
 strophanthin, acetylcholine and
 vagal stimulation, 11193
 in insulin shock in schizophrenia, 16722
 in myocardial disease, 9508
 in myocardial infarction, 9533, 11170
 in oxygen deficiency, 13128
 in pericarditis, 16725
 and phonocardiogram tracings, 14772

Heart (continued)
 electrocardiogram (continued)
 precordial lead, importance, 11195, 13132
 in pulmonary embolism, 11173
 in pulmonary tuberculosis, 14765
 in pulsus alternans, 11161
 Q-T interval, length, 7703
 S-T interval, in normal students,
 12643
 significance in hypertension, 12643
 S wave, 12643
 in silicotic pulmonary fibrosis, 2423
 substances affecting T wave, 11207
 in twins, 13109
 mono- and dizygotic, 5355
 U wave interpretation, 11181
 of ventricular complex, 4072
 embryonic, of Asiatic elephant anatomy,
 5948
 beat initiation and contraction rates,
 Ambystoma, 5946
 development, electrocardiographic
 records during, 9760
 endocarditis. (See *Endocarditis*.)
 failure, acute nephritis and, 481
 asthmatoïd, circulation time and,
 14771
 cardiac output in, exercise as affect-
 ing, 7717
 posture as affecting, 7718
 chemical nature, 13117
 circulation time in, detn., 5710, 9528
 due to, congenital lesion, 495
 environmental temp. as affecting,
 4057
 mechanism, 7720
 metabolism and mechanical work,
 5728
 in pulmonary disease, 13110
 right-sided, intracranial pressure in,
 16407
 sclerosis of superior vena cava and,
 14761
 thrombosis and, 478
 fibrillation, auricular, faradically in-
 duced, ventricular rate in, 12643
 A-V conductivity and, 14655
 after p-sympathol, 14860
 filling, anginal pain and, 490
 flavoprotein, catalytic function, 16810
 foramen ovale, premature closure, 11455
 time of closure, lamb, 476
 function in hypertension, 504
 glycogen, in hyperthyroidism, 4037
 as influenced by:
 adrenalin and anoxia, 7706
 copper, 11256
 diphtheria toxin, guinea pig, 11156
 histamine output, ephedrine as affect-
 ing, 539
 hydatid disease in, 10482
 hypertrophy, in congenital cavernous
 hemangioma, 5724
 in infants, etiology, 11134
 in renal hypertension, dogs, 2263
 implants, in fish embryos, 8044
 infarction, muscle bundle localization,
 496, 497
 as influenced by:
 acetyl- β -methylcholine, 5744, 11168
 acetylcholine, 4126, 7722, 11228
 adrenalin and *Panulirus*, 13004
 cholesterol and, 4173
 proteins and, 13159
 urea, and anesthetics, 9548
 acridine derivatives, 7807
 analeptics, frog, 7774
 anemias, 2400
 Artemesia herba alba, 7762
 barbiturates and stimulants, 2310
 benzedrine, man, 14788
 bile and bile salts, 16749
 cardiac glucosides, frog and toad,
 514
 choline, frog, 4126
 congo red, 11245
 cumulative action of digitalis prin-
 ciples, cat, 9555, 9556
 cyclopropane and barbiturates, 13187
 digitalis, 13178
 digitalis and Ca, 5770
 digitoxin, 7744, 7745, 16779
 diphtheria toxin, guinea pig, 11156
 drugs, 4115, 13178
 technic for studies on mammalian
 isolated, 9572
 drug 938 F, frog and cat, 11229
 drug 1262 F, mammals, 13142
 epinephrine and barbitol, 16793
 erythrophloesum sulfuricum, 5732
 extracts of adrenergic fibers, frog,
 7554
 glyoxaline derivatives, 14816

Heart (*continued*)

- as influenced by (*continued*)
- hesperetin,4124
 - histamine, frog,4183
 - hydroxyphenylisopropylamines, 16782
 - infection from *Omphalonus*,13167
 - insulin shock,11227
 - irritation of upper respiratory tract and esophagus,12643
 - isalon,11237
 - Mg perfusion, graded responses and, turtle,12643
 - mecholy and adrenalin in thyrotoxicosis,405
 - mistletoe extracts,5748, 5780
 - muscular work,7715
 - O₂ poisoning,9494
 - pancreatic extract,5744
 - paredrine, man,14839
 - phenanthrene derivatives,7791
 - α -phenyl- β -aminopropane,16764
 - posterior pituitary and phenobarbital,9525
 - potassium,4126, 7790
 - potassium and Ca,16307
 - procaine, cat,14831
 - pure digitalis-like glucosides,11188
 - pyruvic acid,7707
 - quinidine derivatives,5743
 - quinine derivatives,5746
 - rhamnetin,4124
 - stim. of depressor nerves and carotid sinus, asphyxia and,7704
 - strontium,7747
 - strophanthin, blood Ca and,4114
 - strophanthin derivatives,5772
 - strophanthin and urea,7768
 - sulfanilamide,13178
 - sympatholytic drugs,14821
 - sympathomimetic amines in anesthesia,12643
 - Thevetia yocotti*,16756
 - thiobarbiturates,525
 - urea,5762, 14842, 14842A
 - urease, cat,16796
 - veritol, man,7806
 - inhibitory reflexes from nose and throat,12643
 - intramycardial pressure, aortic blood pressure and,4078
 - lactic acid metabolism, caffeine as affecting, dog,7798
 - lesions, myocardial, from non-penetrating traumatic injuries, 16751
 - in rheumatic fever, blood sugar and,1986
 - in subacute bacterial endocarditis,16895
 - lung preparation, anoxemia as affecting metabolism in, dog,9184
 - coronary sinus outflow, digitalis and,4066
 - fats in blood,3686
 - sympathomimetic amines as affecting,2292
 - utilization of various metabolites by,3686
 - lymphatic drainage,7942
 - metabolism, epinephrine as affecting,5717
 - of fibrillating epinephrine as affecting,16780
 - murmurs, systolic, caused by aneurysm of coronary artery,2278
 - nonpathologic,11198
 - muscle. (See also *Muscle*.)
 - acetylcholine in, strophanthin as affecting,16787
 - and auriculo-ventricular conducting system, cytology, dog,7939
 - after burns,5715
 - contractility, digitalis as affecting,11162
 - flavoprotein in, isolation,14780
 - granuloma of tuberculosis, rheumatism and,5822
 - infarction, effect on electrocardiogram,9538
 - injury potential,12643
 - changes in region,5704
 - protoplasmic movement in,4043
 - refractory phase, factors affecting,491
 - innervation,9689
 - ischemia, effect on coronary flow,11182
 - rupture, coronary sclerosis and,11167
 - after infarction,7723
 - scars, significance,14766
 - strophanthin as affecting,400
 - vascular sinuses in, dog,11457
 - ventricular disc,496
 - neurosis, with organic heart disease,16745

Heart (*continued*)

- output, adaptation while standing,12643
- arterial depots and,493
 - and function, study from heart's recoil and impacts,12740
 - as influenced by:
 - dinitrophenol,4156
 - factors,2264
 - heat,13102
 - posture,9509, 9511
 - in pregnancy, man,2159
 - roentgenkymography and,9522
 - overstrain, blood cystine-cysteine and,16748
 - O₂ consumption, measurement,7720
 - oxygenator circuit for perfused,7318
 - pacemaker, of isolated terrapin sinus venosus,12643
 - relation to arrhythmia and block in *Nitella*,1393
 - parasympathetic stimulation, thyroid as affecting,11050
 - pericardial sac, relation to diaphragm in mammals,7930
 - phosphatide in, frog,4172
 - potassium in, digoxin as affecting, 7810
 - precordial friction rub in spontaneous pneumothorax,11187
 - Purkinje fibers, distr. in septum, cow,12643
 - rate. (See also *Pulse*.)
 - blood distr. and, posture as affecting,16721
 - brachycardia, dietary, in dog,12643
 - of hibernating marmot,3543
 - as influenced by:
 - alcohol, rabbit and dog,11258
 - atropine in sympathetomized dogs, rôle of vagus in,11075
 - benzedrine,552
 - CO,4080
 - carotid sinus denervation,4062
 - carotid sinus stimulation,505
 - digitalis in fibrillation, man, 13154
 - drug 938 F, hypertensive dog,12643
 - epinephrin, glomerular and glomerular fish,11093
 - man,524
 - ether and cyclopropane, dog,11248, 11249
 - exercise, dog,7711
 - exercise and emotion in sympathetomized dogs, rôle of vagus in,11076
 - heat,13102
 - insulin shock in schizophrenia,16726
 - intravenous dextrose and sucrose,11174
 - leucotaxine,624
 - morphine,11248, 11249, 13178
 - posture,9509
 - prolonged exercise,2014
 - reading under various levels of illumination,11184
 - sodium azide, embryonic fish,12643
 - thyroid extracts, rat,14641
 - work and posture,9512
 - in purebred dogs,273
 - voluntary acceleration,14770
 - of whites in tropics,16742
 - reactive, hyperemia, duration of ischemia and,12648
 - reflex, conditioned, frog,11121
 - refractory phase, "action phenomenon,"13123
 - drugs as affecting,16774
 - regulation, by two pacemakers,4096
 - regurgitation, in uremia,4094
 - review,7244
 - rhabdomyoma, congenital,7840
 - rhythm, abnormal, therapy,9513
 - as influenced by:
 - atropine,5749
 - hydrostatic pressure, *Mytilus*,14750
 - sensitivity to acetylcholine, strophanthin as affecting,401
 - to Mg, frog,4172
 - size, in anemic children, exercise and transfusion and,16823
 - body build and,11169
 - detn. with roentgenkymograph, 5720
 - in malignant hypertension,9527
 - spasm, exptl., drugs affecting,4104
 - stroke volume, detn.,13107
 - x-rays and,13120
 - substances poisonous to, in *Galatopsis latera*,15687
 - in sudden cardiac deaths,13122
 - symptoms, neurosis and, vs. organic disease,7909

Heart (*continued*)

- thrombi, mural, production and prevention, dog,12643, 16746
 - tissue culture,11452
 - tissues, growth in vitro, gases as affecting,756
 - tonus and rhythm cations as affecting, snail,3548
 - tumors, metastatic, incidence, diagnosis,13230
 - with signs of valvular heart disease,612
 - valve, aortic, bicuspid, and coarctation of aorta,11178
 - calcareous disease,5714
 - regurgitation syphilitic, incidence,11208
 - atrio-ventricular, development in man,17042
 - blood supply in endocarditis,672
 - disease, in opossum,16729
 - efficiency, measurement,9523
 - localization of vegetations,9507
 - mitral stenosis, cyanosis, etiology,4058
 - pulmonary, stenosis due to atheroma, case,7709
 - rôle in bacterial endocarditis vegetation formation,16888
 - tricuspid, acquired lesions,11176
 - vascularization,5888
 - ventricle, contraction, in cardiac infarction,11189
 - elasticity and hysteresis, tortoise,7714
 - electrical field on surface, turtle,12643
 - excitability, electrical recovery,12643
 - extrasystole, on induction shock,4075
 - position of stim. and,4085
 - injury potentials on surface,12643
 - Parascaris* in, horse,1566
 - K-strophanthosid as affecting, tortoise,4079
 - recovery cycle, supernormal period,4072
 - rhythm, sub-rheobasic current and,14779
 - supernormality, agents causing, 11177
 - systole, detn. by formula,5727
 - vagal escape, acetylcholine and, 7727
 - volume, aortic pressure and,4091
 - detn., heart size and,5712
 - in healthy men,11185
 - wt. in relation to body wt., mammals and birds,670
 - work, economy, in hypertensive hearts,9536
 - elasticity and, tortoise ventricle,7714
 - of failing heart, measurement,7720
- Heat. (See also *Body temperature*; *Diatomy*; *Fever*; *Metabolism*; *Respiration*, cellular; *Specific dynamic action*; *Temperature*; etc.)
- body loss. (See under *Body*.)
 - economy, of succulents,12568
 - effect on:
 - bacterial spores, factors affecting,2668
 - blood pressure, rabbits,13102
 - cell adhesion in potato tuber,1026
 - cholesterol, photoactivity and,9595
 - circulation in extremities,5722
 - inflammation, rabbits,14919
 - muscle,13088
 - peripheral circulation, posture and,16740
 - permeability of potato tuber tissue,1027
 - skin,3578
 - trichina larvae,10506
 - and human biology,8980
 - increment. (See *Specific dynamic action*.)
 - induction of haploidy by, *Secale*, 14848
 - as insecticide for mites,10416, 10420
 - lethal effects, kinetics,8868
 - localized, effect on presumptive ectoderm of frog egg,13334
 - production. (See also *Metabolism*, respiratory and energy; *Muscle metabolism*; *Nerve metabolism*.)
 - protoplasm coagulated by, algae, 15722
 - resistance, of bacteria to, detn. in non-spore formers,6257
 - of oats, vars. compared,17569
 - sensitivity, evidence against Alrutz theory,2207, 2208
 - sensitizing bacterial spores by ultraviolet light,2754
 - sexual. (See *Estrus*; *Menstruation*.)
 - spontaneous, of insect bait,5074
 - stroke. (See under *Stroke*.)

- supplemented, in orange orchards, effect on yield,.....15599
supplemented, in orange orchards, effect on yield,.....15599
methods,.....15600
in poultry pens, effect on egg production and feed consumption,.....17098
therapy, intra-colonic, in parasitic infections,.....3240
Heater(s), for orchards, types compared,.....1276
Heaths, afforestation in Germany,.....3036
Hebecephalus (p.1875⁴), n. spp.,.....16038
Hecalus (p.1875⁴), new species from Australia,.....18016
Hectia (p.1864⁴) *lundelliorum*,.....2841
Hedera helix, growth of leaves,.....1376
Hederagenin, chemistry,.....15691
Hedges, as windbreaks, book,.....6527
Hedgehogs, hibernation, carotinoids as affecting,.....12834
Hedysarum spp., as soil indicators,.....10784
Height. (See *Body*, *height*.)
Helipus (p.1876²), n. spp.,.....6875
Heinz-Ehrlich bodies. (See *Erythrocytes*.)
Heisteria (p.1866⁴), n. sp.,.....2865
Heleocharis multicaulis, note,.....2837
Helianthemum (p.1866²), n. sp.,.....17538
Helianthus (p.1867⁴). (See also *Sunflower*.)
exudation in, indoleacetic acid as affecting,.....4919
origin of intercellular spaces in meristems,.....2908
phototropism in, factors affecting,.....6615
tumor growth, stimulated by apple emanation,.....14052
annuus, dry weight and S content of leaves, daily and annual variations in,.....8598
exudation rate, daily cycle in,.....6597
growth retarding and promoting substances in seed,.....13997
growth and tension in hypocotyl,.....1370
seed and oil yields, correlated with morphological characters,.....15565
tuberosus, storage organs, morphogenesis,.....1411
vitamins in,.....7469
Helianthus (p.1872⁴) *kubini* (*H. kubini*),.....14225
Heliantheridae (Echinodermata), p.1872³
Helicia (p.1865⁴), n. spp.,.....11833, 15505
Helicidae (Mollusca), p.1872³
Helicinidae (Mollusca), p.1872³
Helicobasidium (p.1862⁴) *purpureum*, hosts,.....13735
Helicobia (p.1878⁴) *australis*, associated with grasshopper,.....6907
biology,.....6899
† *Helicopron* (p.1879⁴), n. spp.,.....5162
Helicotrachon (p.1864⁴), n. comb.,.....8427
Heligmosomidae (Nematoda), p.1870³
Helina (p.1877⁴), n. sp.,.....6894
Helionella (p.1864⁴) *theodori* (D), in E. Prussia,.....10097
Heliopecter macrochira, parasites,.....15943
Heliophyllum (p.1869⁴) (D), taxonomy,.....10535
Heliothis (p.1877⁵) *armigera*, control of hibernation in Connecticut,.....15899
infestation, loss relation to climate,.....17863
obsoleta, control of, by fluorides on lima beans,.....8640
control of,.....10413
on corn as affected by desilking,.....17873
on cotton, Tucuman,.....534
food for,.....10573
Spicaria on,.....3205
on tomato and corn, interrelations of, control,.....3189
virus disease of, symptoms,.....10455
Heliothrips (p.1875⁴) *rubrocinctus*, biological control of,.....3669
Heliotropism. (See *phototropism* under *Tropisms*.)
Heliotropium (p.1867⁴) *europaeum*, ovary interpretation of,.....2910
rotundifolium, root system,.....10780
Helicomyces (p.1882⁴), † new specimens from Nebraska Oligocene,.....18108
Helisoma campenulatum smithi, larval trematodes of,.....5107
Helix (p.1872⁴) *pomatia*, muscle tonus regulation,.....7686
respiration,.....14598
xylanase from, activity,.....14032
vivipara, syn. and n. name for,.....10567
Heliozoa (Protozoa), p.1868³
Helleborus, culture, propagation, and spp.,.....11984
Helula undalis, population on crucifers,.....5045
Helminth(s). (See also *Acanthocephala*; *Cestoda*; *Helminthiasis*; *Nematoda*; *Parasites*; *Trematoda*.)
of calves, control, Philippines,.....1562
chap. in manual,.....14164
clinical discussion,.....3238
dangers, in sub-tropics,.....6723
diagnosis, efficiency,.....17895
technic,.....10501
of dog and cat, Egypt,.....10480
in dogs, Surinam,.....15956
effect on proteolytic enzyme activity,.....17891
epidemiology, Florida,.....6742
of horses, Hawaii,.....17897
immunological relations, *Ascaridia*,.....6127
Bilharzia,.....15149
Bothriocephalus,.....2608, 2609
Cestoda,.....17239
Cysticercus,.....4543, 8171, 13531
intestinal nematodes,.....15176
Nippostrongylus,.....11572
Strongyloides,.....6130
Taenia,.....17240
Trichinella,.....942, 15174, 17241
incidence, in children, Louisiana,.....6754
human, Cuba,.....6720
literature, Australia,.....3280
Santiago, Cuba,.....6748
survey, Indiana,.....14176
intestinal, effect on erythrocyte sedimentation rate,.....1540
type of metabolism,.....1573
of liver, ruminants and swine,.....12260
of man and animals, Hawaii,.....17916
ova, recovery from feces, technic, 3239
of poultry, Scotland,.....6749
of sheep and cattle, viability on pasture,.....12244
of sheep, Sweden,.....5091
in urodeles, Louisiana,.....6716
Helminthiasis. (See especially under specific helminthiasis, e.g., under *Hookworm*; and under genera, e.g., *Necator*.)
incidence, and distr., Cuba,.....14192
Venezuela, age and sex as affecting,.....10511
in Nigeria,.....8690
nodules, cattle and buffalo, Bulgaria,.....10500
resistance, factors affecting,.....14192
skin lesions in negroes, Africa,.....12256
Helminthocycladiaceae (Algae), p.1860⁴
Helminthology, counting of ova in feces, technic,.....3239
medical, in Mexico,.....14192
shaking method for diagnosis,.....1563
Helminthosphaeria (p.1861⁴), n. sp.,.....15453
Helminthosporium (p.1863⁴), n. sp.,.....17487
causing kernel smudge of cereals,.....12124
gramineum, on barley, resistant var.,.....6674
oocellum, on *Pennisetum purpureum*,.....1481
oryzae. (See also *Ophiobolus myriogaeus*.)
salvum, causing root rot of wheat, 17758
on cereals, root growth and injuries as factor,.....10348
pathogenicity, as affected by soil fungi,.....17821
on wheat, environmental relations and control,.....14080
in wheat root rot, mineral nutrition as affecting,.....8623
Helminthostachys (p.1863⁴), monograph,.....2815
Helobiae (Monocotyledones), p.1864⁴
Helodermatidae (Reptilia), p.1880³
eye, sclerotic plates, structure,.....5879
Helodidae (Coleoptera), p.1876⁴
Helophorus (p.1876⁴) *erichsoni*, in mosquito pool,.....3202
Helotiaceae (Fungi), p.1862⁴
Helotium (p.1862⁴) *schimpertii*, relation to *Tilletia sparganii*,.....4733
Helvella esculenta, toxicity, to animals,.....3055
Hemagglutination. (See also *Agglutination*; *Blood groups*; etc.)
auto-, in acquired hemolytic jaundice,.....11334
mechanism,.....2519
Hemagglutinin(s). (See also *Agglutinins*; *Blood groups*; etc.)
iso-, titers in blood diseases,.....17234
of pneumococci antisera,.....4534
of snake blood,.....2596
Hemagglutinogens, inheritance,.....4534
Hemat. (See under *Pigments*.)
Hematocrit, for estimating population density of micro-organisms in liquid media,.....6764
Hematocritophagic barrier. (See also *Blood vessels*; *Meninges*.)
antitoxin passage through,.....6102, 6103
permeability to antibodies, 8113, 18486
to halogens and thiocyanate,.....81178
to horse serum in poliomyelitis monkeys,.....12649
increased by *Torrella* infection, 8191
in poliomyelitis,.....9081
to toxins, electric charge as affecting,.....11529
to urea,.....3647
secretion study,.....1964, 1990
in white and negro children,.....12643
use of acid dye as test of disorders,.....7248
Hematology. (See under *Blood*.)
Hematopoiesis. See also *Bone marrow*; *Erythrocytes*; *Leucocytes*; *Spleen*; etc.)
in acute erythromyeloidosis,.....5827
in aleucemic lymphosarcoma cell leukemia,.....5837
in aplastic anemia,.....5835
argentine cells and,.....14930
erythroblastic splenomegaly during pregnancy,.....16664
erythropoiesis, bacterial toxins as affecting,.....5842
after hemorrhage,.....1984
in human embryo,.....4317
as influenced by:
acetylcholine, in anemic rabbits,.....11326
brewer's yeast, in pernicious anemia,.....9615
charcoal adsorbate of liver extract,.....648
choline,.....9542
diet,.....2032
gastric juice, in pernicious anemia,.....9616
in rat fetus,.....9619
iron, Fe-As waters and climate, 14513
liver extracts, chicken embryos, 646
liver, muscle, stomach, and yeast, in pernicious anemia,.....5843
Ni, Zn, Mn, Fe, and Cu,.....14512
porphyrin and chlorophyll in diet, rabbit,.....10910
spleen,.....3658
x-rays,.....3576
myelogram of sternal marrow,.....4244
in pernicious and post-hemorrhagic anemias,.....7883
in polycythemia vera, sternal, spleen and liver puncture and,.....5830
rate in bleeding peptic ulcers,.....16419
stimulation by x-rays, detection by reticulocyte count,.....3577
substance in liver,.....3746
time curves for estimating,.....1984
Hematopoietic organs. (See also *Bone marrow*; *Lymphnodes*; *Spleen*; etc.)
of *Bufo arenarum*,.....7936
in fetus, estrogens as affecting,.....2170
hyperplasias, classification,.....4251
nucleic acids as affecting,.....10900
Hematoporphyrin. (See under *Pigments*.)
Hematarga (p.1877⁴) *atomaria*, comparison with *Bupalus piniarius*,.....10430
Hematuria. (See *Blackwater fever* and *Urine*.)
Hemerobiidae (Neuroptera), p.1875⁴
predator of aphids, Ont.,.....10451
Hemiteles (p.1872⁴) *schoelleri* (J.),.....16007
Hemiteles (Echinodermata), p.1872³
Hemiballismus, clin. path.,.....16945
Hemiberlesia (p.1875⁴), n. sp.,.....10605
Jourdani,.....6917
Hemicellulose. (See also *Cellulose*; specific hemicellulose, e.g., *Xylan*.)
extraction from plant materials, pectin as affecting,.....11958
from oak sawwood, chemistry,.....15765
Hemidactylus (p.1879⁴), notes,.....6837
thraxicus, redescribed,.....6841
Hemigrammus (p.1879⁴), n. sp.,.....8812
Hemihyalaea (p.18771⁴) *edwardsii* f. ochraceous,.....5143
Hemileia (p.1862⁴), n. spp.,.....17500
Hemileuca (p.1876⁴) spp. metamorphosis,.....5141
Hemin. (See under *Pigments*.)
Hemipodus (p.1871⁴), sp. descr.,.....1608
Hemiptera (p.1875⁴), abdominal stink glands, development,.....2476
Hemirhamphidae (Pisces), p.1879⁴
Hemiscylliidae (Elasmobranchii), p.1879⁴
HEMITROMBICULA (Arach.) (p.1874⁴)
simplex, from *Elaeapha*,.....3314

- Hemiuridae (Platyhelminthes), p.1869⁴
Hemiurus (p.1869⁴) arelisci, 6803
Hemlock, rust (*Melampsora farlowii*),
pathogenicity and control, 12153
Hemocytometer, error of estimate of cell
count with, 12643
Hemogenesis. (See *Hematopoiesis*.)
Hemoglobin. (See also *Pigments*.)
antibodies to, non-formation by leuco-
cyte immunization, 8158
ascorbic acid and, coupled oxidation,
. 16416
in blood, acclimatization to low atm.
pressures, dog, 7531
alterations, recording, 7362
in avian malaria, hens, 7862
from birth onwards, mammalia, 3633
concentration, body size and, 12643
diurnal variations in normal ♂♂,
. 10914
fresh water fish, 7371
inactive fraction, 10881
as influenced by:
altitude, 3649
anti-hemolytic factor of pig's
plasma, 640
breathing pure O₂, 14587
drugs, 13178
factors, Indian Nellore cattle,
. 16423
pregnancy, man, 3973, 3974
daily variations, 3968
Fe as affecting, 16442
pigs, 4408
sheep, 7575, 7576
sodium Cl ingestion, 16435
vit. E, 5582
at altitude 70° in arctic regions, 3619
in mice, 249
in natives of Iraq, 5883
in newborn rabbits, 9146
oxygen affinity, reptiles, 10942
role in earthworms, 12753
standards, 7292
carbon monoxide, detn., 3591, 5493
carboxy-, mol. wt. of product from,
. 7275
denaturation by urea, 10899
derivatives, reaction with hydrogen
selenide, 1952
detn., 9119
micro-, 7310
optical, 12715
rapid, 5488
in undiluted blood, 3603
enzyme detn. with, 185
formation. (See also *Hematopoiesis*.)
in anemia, protein intake and, 4247
factors in liver, 9267
as influenced by:
iron, rat, 14510
nephritis, dogs, 7889
porphyrin and chlorophyll in diet,
rabbit, 10910
role of Cu in, 10922
globin, total S, cystine and methionine
content, mammals, 14494
heat of oxygenation, 7395
heme-globin linkage, 7274, 7275
as influenced by isopropyl ether and
gasoline, 7923
by valine and isovaleric acid, 13264
metabolism, in chronic infections, 14935
in pulmonary tuberculosis, 11328
met-, in aniline poisoning, alcohol as
affecting, 16784
in blood of cyanotic patients after
sulfanilamide, 10941
and cyanmet-, recording formation in
blood, 7365
effect on oxidation of amines and
amino acids, 206
formation in blood solns. by urine,
from pyridine, 7572
idiopathic, familial, 7874
porphyrinuria and, rat, 16444
reduction, mechanism in nucleated
and non-nucleated erythro-
cytes, 7882
sulfanilamide as forming, methylene
blue and, 527, 5515
in sulfanilamide therapy, 17252
17253
sulfonamides causing, 17274
methemoglobin and, reactions with cy-
anide, 3620
redox system, 1910, 5479
in muscle, nitrite as affecting, 10889
in oil sprays, deposit, pH as affecting,
. 10460
organ specificity, 8158
oxy-, active groups at various pH's,
. 7394
dissociation, law of mass action in,
. 5483
- Hemoglobin (continued)
oxy- (continued)
O₂ dissociation curve, CO₂ as affect-
ing, 16414
precipitation by Zn, Cu and Hg ions,
. 7375
reduced, and Co, detn. in blood,
. 7363, 7364
oxy- and carboxy-, pancreatic digestion,
. 7274
oxy-, met-, and, Cu ions as affecting,
. 10924
oxy-, met-, and sulf-, detn. in single
sample, 1919
-oxygen equilibrium, 12742
parturient, in dairy cattle, 15373
peroxidase action activation by plasma
factor, 14511
prep. and detn. of % O₂ saturation,
. 1951
relation to bilirubin, anemic dogs,
. 11315
synthesis, pyrrole-containing pigments
and, 10911
Hemoglobinuria. (See also *Piroplasmosis*
and under *Urine*.)
caused by *Helvella esculenta*, 3055
fatal, after chronic malaria, unip-
mented plasmodia in, 15952
paroxysmal, clin. pathol., 637
Hemogregarine, from gecko, 12285
Hemocytometer, accuracy, 7355
Hemolymph. (See *Blood*.)
Hemolymph nodes, of rat, function, neph-
rectomy and adrenalectomy as affect-
ing, 16964
Hemolysin(s). (See also *Antibody*; *Blood*
groups; *Lysin*; *Serology*; *Strepto-*
lysin; etc.)
auto-, in paroxysmal hemoglobinuria,
. 636
of *Bacillus perfringens*, ultrafiltration,
. 13480
as cause of hemolytic anemias, 633
Clostridium production, factors in, 4498
of fish sera (normal), constitution, 6082
formation, vegetative nervous system
as affecting, 2545
group-specific, production in rabbit,
. 2594
in hereditary hemolytic jaundice, 4246
heterogenic, in pulmonary tuberculo-
sis, 2543
in horse and sheep blood, demonstration
and properties, 18445
from leek, 2583
mammalian vs. fish, 6082
relation to serum proteins in various
spp., 2571
of sheep blood, demonstration of group-
specific, 18517
staphylococcal alpha-, production in
chemically defined media, 4454
beta-, isolation and titration, 910
detoxication, 4529
gamma-, properties and significance,
. 911
as influenced by:
cholesterol, 17150
heat, 4501
saline, 4502
titers of complement vs., 2571
Hemolysis. (See also *Blood cells*; *Blood*
groups; *Erythrocytes*.)
by abietic, agaric and lichesteric
acids, 4112
acceleration by benzene and derivatives,
. 12768
by ammonium chloride, 10987
by antiship hemolytic horse serum,
acetylene as affecting, 18423
by *Bacillus anthracis*, 8222
by complement, mechanism, 8156, 8157
by diaminocholestan, 7805
effect on blood O₂ combining power,
marine fishes, 10930
by endo-succinic acids derived from
polycyclic hydrocarbons, 7393
factors in hemolytic anemia, 638
fixed framework of red cells and, 3631
ion series in, 12657
in pernicious anemia, lecithinase, lyso-
cithin and, 5826
photodynamic, 12643
as influenced by dye conc., 10886
by light intensity, 10885
percentage curves, 10884
protection against by Congo red, 10926
rate in splenic blood, 3644
reaction velocity, 12722
by serum, as influenced by alectronat,
. 17218
by ingesting vegetable hemolysin,
. 2533
by snake sera, 4434
- tuberculosis as affecting, 11328
by *Vibrio* strains, 6186
in Wassermann reaction, photelgraph
recording, 4491
Hemolytic streptococcus. (See *Strepto-*
cocci, *hemolytic*.)
Hemometer, for detn. of Hb in undiluted
blood, 3603
new method of use, 5488
Hemophilia. (See also *Blood coagulation*;
Hemorrhage.)
blood coagulation studies in, 255
. 7332, 10905
and color blindness, pedigree, 1797
crossing-over, and color-blindness, 1796
lipid in platelets in, 1963
location of gene for, man, 1788
plasma coagulation by trypsin in, 14504
thrombin, delayed formation in, 16401
vit. C in therapy and prophylaxis, 14929
Hemophilus (p.1861⁴), growth regulators
for, 4714
Moraxella n. gen. segregated from,
. 10085
ducreyi. (See also *Chancroid*.)
auxins as affecting, 2780
medium for isolation and growth,
. 2755
duplex. (See also *Bacterium d.*)
(*Moraxella duplex*), 10085
influenzae. (See also *Bacillus i.*; *In-*
fluenza.)
antigenic fractions, 9884
bronchitis (purulent) caused by,
. 4619
dissociation pattern in, 10078
growth as influenced by cozymase,
. 5841
by pellagra blood, 4265
in influenza etiology, 9826
meningitis (purulent) caused by,
. 4619
in pneumonia of diphtheria cases,
. 4617
serological types, (new), 4460
from pertussis, 4460A
number, 4460
specific polysaccharide of type-B, iso-
lation and properties, 17129
vaccine, type-B rabbit therapeutic
antiserum, 6026
pertussis. (See also *Bacillus p.*; *Pertussis*.)
agglutination test for, 8109
animal type, comparisons, 17319
. 7320
antigen, assay of undenatured bac-
terial, 11555
antigenic relation to *Brucella bronchi-*
septica, 4447
atypical form, exptl. infection by,
. 11632
comparisons, 17320
dissociation, characteristics and
chemical analysis, 9865
exp. infection and reisolation, 17319
fever induced by, heterobacteria as
affecting, 882
immunization to, 13487
inhibition of *Shigella dysentery*-in-
duced fever by minimal
amounts, 9878
inoculations in mice, 8232
intranasal inoculations, 13487
phase-I vaccine vs. undenatured bac-
terial antigen, potencies,
. 17123
sera, mouse protection test, 15153
protection vs. agglutination by,
. 15153
soluble component absorbing phase-I
agglutinins, liberation by sonic
vibration, 13418
strains in relation to vaccine pro-
duction, 4430
toxin, isolation and properties, 17320
relation to that of *Brucella bronchi-*
septica, 4447
vaccines, washing as affecting, 6106
suis. (See *Influenza, swine*.)
Hemorrhage. (See also *Bleeding*; *Hemo-*
philia.)
active, splenic P content, 11312
blood pressure recovery, enteral fluid
absorption as affecting, 12643
into brain stem, in intracranial tumors,
. 7829
capillary oozing, post-operative control
by x-radiation of spleen, 14468
in chronic idiopathic parathyroid tetany,
. 9636
control, 12643
effect on:
bleeding time, rabbits, 11329
blood flow, 9529, 12643
blood K, 16426

- pH and bactericidal power of blood,9848
 kidney renin content,7733
 sedimentation rate, guinea pig,11324
 gastric, relapsing,5590
 gastro-intestinal, increasing frequency,2089
 in hereditary hypochromic anemia,13258
 after induced fever, pathogenesis, 10943
 in jaundice,16551
 in liver disease, vit. K and bile as affecting,5889
 massive, physiological and traumatic,3623
 neutrophilia induced by,825
 obstetric, review,16653
 in peptic ulcers,16419
 perivascular, in yellow fever,9810
 pontile, clin. anat.,16340
 pulmonary, hemostatics for,16434
 recurrent effect on blood comp.,1935
 visceral, cause in bone infections, 13416
 Hemorrhagic disease of new-born, prothrombin and,11269, 11270
 Hemorrhagic septicemia. (See *Septicemia, hemorrhagic.*)
 Hemostatics, per os, action,5513
 sango stop and congoed for pulmonary bleeding,16434
 thrombin solns. as,12770
 Hemp. (See also *Cannabis.*)
 Manila. (See *Abaca; Musa textilis.*)
 nutrition, critical periods in,17672
 Sunn. (See *Crotalaria juncea.*)
 Hen. (See *Domestic fowl; Gallus domesticus; Poultry.*)
 Hendersonia (Fungi) (p.1862⁴), n. sp., 15453
 Hendersonia (Moll.) (p.1872¹) *occulta*, dist. ecology and geology,8745
 Henequen. (See *Agave.*)
 Henneguya (p.1869¹) *salmonicola*, in Pacific salmon,10521
 zikawiensis, in goldfish,17926
 zschokkei, on *Coregonus*,3396
 Henotosoma (p.1870¹), syn.,6788
 Heparin, absorption, drugs as affecting,2308
 action, accessory factor necessary for,7833
 anticoagulant action, rabbit,14848
 related to S in,5767
 in blood and tissues after intraven. inj.,3638
 chem. and physiology,9151
 circulatory damaging effect in Eck fistula, dogs,16417
 clinical use,2311
 effect on:
 blood coagulation,3641
 blood sedimentation,5506
 growth, tadpole,7462
 Jensen tumors in rats,14884
 in prevention of coronary thrombosis, dogs,16746
 standardization,14848
 in sedimentation reaction,1993
 Hepaticae (Bryophyta) (p.1868³)
 Hepatitis, amoebic, chemotherapy,11611
 infective, virus (?) etiology,8197
 Hepatozoon (p.1868⁴) *burneti*, from gecko,12285
 Hepsetia *stipes*, liver and spleen implants,8044
 Heptapsogastriidae (p.1875²), structure of abdomen, subfamilies and,3369
 Heptyl aldehyde, effect on spindle cell sarcoma, rat,9541
 on tumors in mice,570, 2374
5801, 16881
 Heraclium *spondylium*, nitrate storage, 116
 Herbs, associated with *Pinus*, root competition,3510
 Herbals, of Aldrovandi,12496
 Italian 16th century,12497
 of Valerius Cordus, monographic study,7089
 Herbarium(a), bryophytes at Pavia, 15477
 of Geo. W. Clinton,1083
 of T. Velley,2820
 Herbicide(s). (See also *Weeds, control.*)
 As as, effect on soils,12108
 for bindweed,10176, 10200, 17565
 chloropicrin as, for nutgrass,10188
 for *Chondrilla juncea*,1180
 for control of dodder,10366
 cyanamide vs. H₂SO₄, costs and efficiency compared,4834
 need for international catalog,17844
 NaClO₂ as, effect on soils,13804
 soil texture and fertility as affecting,10386
 sprays as, for weeds in cereal crops,13886
 use on firebreaks,15649
 Heredity. (See also *Eugenics; Genetics; Mutation.*)
 of acquired characters. (See *Acquired characters.*)
 cytoplasmic, in *Neurospora crassa*,5313
 and education,1795
 in man. (See also *Man, inheritance.*)
 mechanized exhibit,16208
 mental qualities of races and,9729
 morbid, in isolated rural community,3473
 present trends in study,7163
 of psychopathies and criminality, 5359
 rôle in etiology of psychosis,2458
 Thomson theory,10741
 melanism in snowshoe hare, suggested study,7037
 not mendelizing,7125
 method of analysis, when phenotypes overlap,5303
 new viewpoints,12514
 quantitative, distinguishing between two types of gene action in,1734
 Hereothrips (p.1875¹) *ipomea*, on cotton, Sao Paulo,12198
 Hermaphroditism. (See also *Gynandromorphism; Sex, intergrades; Sex reversal.*)
 chromosome cycle and, *Rhabditis fülleborni*,1718
 in fish,3378, 14285
 in man, analysis of selected pedigrees,5354
 basis,14959
 in milk goats,16195
 in *Rana* (frog),3398
 Hermetria (p.1877¹) *iluceus*, from honey-bee colony, U.S.A.,18011
 Hernandia (p.1865¹), n. sp.,6437
 Hernandiaceae (Dicotyledones), p.1865¹
 Herniaria (p.1865¹) *glabra*, embryogeny,2914
 Heron(s), descr. and life histories, book,8840
 Gray, diet,7003
 little blue, *Gardina* in,6773
 migratory status, Gr. Britain,14305
 night. (See *Nycticorax.*)
 of Reelfoot Lake (Tenn.),7005
 Herpes. (See also *Encephalitis.*)
 immunity, mechanism,889
 virus. (See also *Encephalitis, virus.*)
 blood-spinal fluid barrier permeability to, increase by *Borrelia* infection,8191
 culture on chorioallantois,9942
 immunol. relation to B-virus,9943
 inactivation by immune sera,8104
 persistence after immunization by live virus,889
 tissue culture,8104
 titration on chorioallantois, and study,17124
 zoster, in Brazil,17288
 complement fixation of antigens of varicella vs.,843
 Herpetomonas. (See *Leishmania.*)
 Herpetothores (p.1881³), new subsp., 1651
 HERPOSIRA (Fungi) (p.1863⁴) *velutina* on *Xanthorrhoea*,8407
 Herring. (See also *Clupea.*)
 distr. in North Sea,144
 in relation to food,3530
 to wind conditions,143
 fat changes in cold-stored,10032
 growth rate,1875
 detn.,1866, 3523
 North Sea,1861
 migration, phytoplankton and,147
 as pig feed,11476
 population, in Flemish Bight and Channel,157
 salt-curing, mechanism,10056
 smoke-cured, freezing and cold storage,10033
 year classes, variations in,146
 Hertzian waves. (See *Electric field, high frequency oscillating.*)
 Hesperetin, cardiac action,4124
 Hesperidae (Lepidoptera), p.1876⁴
 Hesperinae (Lepidoptera), p.1876⁴
 Hesperilla (p.1876⁴) *chrysotricha leucosia*,5144
 Hesperochiron (p.1867¹), n. syn.,1158
 Hesperomela (p.1865⁴), n. sp.,2865
 HESPEROMYRUS (Pisces) (p.1879²) fry,16054
 Hesperonoe (p.1871¹), syn.,17962
 Heterakis gallinae, incidence, Scotland,6749
 Heteranomia (p.1872³), larva described,3301
 Heteroauxin. (See *Indole acetic acid under Hormones, plant.*)
 Heterocheilids, larvae, in marine fish,10496
 Heterococcales (Algae), p.1860²
 Heterodera (p.1870¹) *marioni*, on *Aleurites fordii*, effect on growth,15819
 on cotton, comparative varietal injury,1481
 egg production of,17774
 excised roots and shoots attracting,17770
 on *Gerbera*, control,10416
 hosts of, China,6643
 on pineapple, control by predaceous fungi,15874
 resistance to, breeding horticultural plants for,15843
 nature of,6665
 on *Robinia*, control by hot water treatment,3169
 on tobacco, time of transplanting as affecting,3169
 on tomato, control by soil fumigation,3169, 17768
 effect on wilt resistance,17826
 schachtii, control,1460, 1465
 infesting *Melilotus alba*,17771
 longevity of cysts in soil,1431
 on oats, development of larval stages,4973
 on potato, control,1433, 6641, 6684
 varietal resistance,12148
 Heterodiadema (p.1872²) *libycom v. nigeridense* (K),14227
 Heterodontidae (Elasmobranchii), p.1878⁴
 Heterodontus (p.1878⁴) *portusjacksoni* nervous system, anatomy,4382
 Heterogeomys (p.1882²) *hispidus*, n. subsp.,10662
 Heterognathi (Pisces), p.1879²
 Heterohemagglutinins. (See *Hemagglutinins.*)
 Heterokontae (Algae), p.1860²
 Heteromyia (Pterygota) dist. in relation to Ca and Mg,3498
 Heteromyidae (Mammalia), p.1882⁴
 Heteromyrus (p.1880⁴), n. sp.,8815
 Heteropatella (p.1862⁴), tax.,15464
 Heterophile antibodies. (See *Antibodies.*)
 Heterophile antigen. (See under *Antigen.*)
 Heterophrymus (p.1874²) *longimanus*, 8321
 Heterophyes heterophyes, in cats,10480
 Heterophyidae (Platyhelminthes), p.1869⁴
 Heteroploidy. (See *Chromosome number.*)
 Heteropoda (p.1874²), n. sp.,3318
 Heteropycnosis. (See *Chromosomes.*)
 Heteroscyphus (p.1863³), n. comb., 4752
 Heterosis. (See also *Genetics; Hybrid.*)
 in crosses of *Populus*,1758
 in *Cucumis sativus*,12529
 and fertility, in cross-bred mice,8951
 interrelation with inversions and recombinations,1786
 in *Neurospora crassa*,5318
 and nuclear size in plumular meristems, maize,3457
 and seed characters, maize,16184
 in yak-cattle hybrids, study of blood composition,8954
 Heterosomata (Pisces), p.1879⁴
 Heterospatha (p.1864⁴), n. sp.,10121
 Heterosporium (p.1863³), n. sp.,15453
 Heterosteus (p.1878¹), from Greenland, (D),8235
 Heterotetrax (p.1881³), n. subsp.,7028
 Heterothallism. (See under *Sex.*)
 Heterotrichales (Algae), p.1860²
 Heterotrichida (Protozoa), p.1868³
 Heterozygosity. (See *Heterosis; Hybrid.*)
 Hevea. (See also *Latex; Rubber.*)
 brasiliensis, diseases of new plantations,6689
 Fomes lignosus, on factors affecting pathogenicity,3169
 latex tubes, arrangement and occlusion,6625
 leaf diseases new to India,3111
 Hexamethylenamine. (See *Methenamine.*)
 Hexamethylenetetramine. (See *Methenamine.*)
 Hexamita (p.1868³), in enteritis, turkey poult,6735
 from quail and partridges, transmission expts.,15964
 Hexatoma (p.1877²), n. spp.,14251
 Hexatylus (p.1870¹) *intermedius*, in citrus fruit,15995
 viviparus, food of, fungal hyphae,1603
 morphology of,1603
 saprophyte from gladiolus,1602
 Hexosamine, acetyl-, in brain,9164
 Hexosa. (See *Sugar.*)
 Hexuronic acid. (See *Ascorbic acid; Vitamin C.*)
 Hexyl-resorcinol, in trichinosis therapy,8718

- Hiatella* (p.1872⁴), larva described, . . . 3801
Hiatella (p.1862³), taxonomy, . . . 11825
Hibernation. (See *Anabiosis*; *Dormancy*.)
of bats, notes, . . . 5219
effect on spirochaete infections, . . . 853
endocrines as affecting, *Citellus*, . . . 14621
of *Ichnumon* spp., . . . 1634
onset, carotenoids as affecting, hedgehog, . . . 12834
organ changes during, bat, . . . 3965
physiology, marmot, . . . 3543
quarters of *Diabrotica* and *Chalcodermes* (beetles), . . . 17866
Hibiscus esculentus. (See *Okra*.)
sabdariffa, alcohol-producing bacillus from, . . . 4697
Hickory. (See *Carya*.)
Hicoria. (See also *Carya*.)
pecan. (See also *Pecan*.)
Hidalgo (p.1867⁴) *wereckii*, phloem development and flowering, . . . 10172
Hides. (See *Collagen*; *Furs*; *Leather*.)
Hieracium (p.1867⁴), tax., . . . 1158, 8444
parthenogenesis and meiosis, . . . 3445
Highmoor(s). (See under *Bogs*.)
Hilaria belangeri, composition and feed value, at various seasons of year, . . . 1204
mutica, density and yield, clipping as affecting, . . . 12583
Hildenbrandia (p.1860⁴) *ricularis*, plasmodesma absent, . . . 8377
Himantariidae (Myriopoda), p.1873³
Himantarium gabrielis, as intestinal parasite, baby, . . . 6729
Himantopus mexicanus, *Gloacitremia* in, . . . 17939
HINTONELLA (Monocot.) (p.1865²), 2830
Hipparion, as indicator of Pliocene, 5084
Hippeastrum (p.1865²), behavior of "drop-let sheath" in pollen tube, . . . 3451
Hippocratea (p.1866²) *indica*, embryogeny and relationships, . . . 4806
Hippocrateaceae (Dicotyledones), p.1866²
Hippoglossidae (Pisces), p.1879⁴. (See *Halibut*.)
Hippolais icterina, 2d brood, . . . 16071
Hippomane mancinella, toxicity, to animals, . . . 6542
Hippophae rhamnoides, nitrogen excretion from bacterial nodules negative, . . . 2741
Hippopotamus, cause of death, in Uganda, . . . 2718
Hippopus (p.1872⁴), functional anatomy of bivalve, . . . 10560
Hippurate, Na, fibrinogen destroyed by, . . . 8639
Hippuric acid, formation, fasting as affecting, . . . 13013
as indicated by nitrogen isotope, . . . 7422
as a liver function test, 7514, 11040
in hyperthyroidism, . . . 9248
Hirschfeld-Klinger reaction. (See under *Syphilis*.)
Hirtella (p.1865⁴), n. sp., . . . 2865
Hirudidae (Annelida), p.1871⁴
Hirudinaria (p.1871⁴), structure of nephridia, . . . 12805
granulosa, prostomial glands, . . . 2474
Hirudinea (Annel.), p.1871⁴. (See *Leech(es)*.)
Hirudo medicinalis, chromaffin nerve cells, nature, . . . 5970
Hirundinidae (Aves), p.1881⁴. (See also *Swallows*.)
Hirundo (p.1881⁴), n. subsp., . . . 8845
rustica, albinism, . . . 5194
gutturata, new cestode from, . . . 6787
in N. America, . . . 5207
rustica, banding, . . . 14296
smithi, nesting behavior, . . . 18074
Histamine, absorption from digestive tract during alarm reaction, . . . 360
in bacterial cultures, extraction and identification, . . . 6803
in blood, during embolism, . . . 16438
chemical mediator for pain, . . . 12643
detn., . . . 215, 12643, 12713
in diagnosis of true achlorhydria, 5829
distr. in blood, . . . 14493
effect on:
anesthesia, . . . 4169
auricle, . . . 7726
avascular pieces of omentum, . . . 4355
bile secretion, cat., . . . 11222
biliary and pancreatic papillae, rabbit, . . . 13187
blood sugar and chloride, . . . 2832
bronchi, . . . 2250
capillary permeability in inflammation, . . . 5815, 5816
coronary arteries, . . . 7702
epinephrine toxicity, rat, . . . 9577
galactose excretion, man, . . . 11244
gastric acidity, significance, . . . 12910
gastric secretion, birds, . . . 9254
after fat inhibition, . . . 5583
rat, . . . 11035
heart, frog, . . . 4133
intestine, . . . 7795
iris sphincter, . . . 13155
male genitalia, . . . 16623
perfused lung, . . . 3775
thiobarbiturate action on heart, 525
visco-elastic properties of lungs, . . . 7529
fate after inj., rat, . . . 2329
intracranially applied, . . . 2336
leucotaxine and, . . . 4234
in lung tissue of cattle, . . . 12801
metabolism in adrenalectomized rat, . . . 12643
in muscle during contraction, . . . 16706
non-specific "desensitization" by, 4448
in plasma and erythrocytes, peptone shock as affecting, . . . 5514
poisoning, resistance to, electrolyte balance as affecting, rat, . . . 10846
pretreatment, effect on physiological changes after adrenalectomy, . . . 12643
production in bacterial cultures and factors affecting, . . . 6304
reactions, dissociation from anaphylaxis, . . . 13459
of white rats, . . . 9896
-release in anaphylactic shock, detection and time relations in various tissues, . . . 9887
in injured intestine, . . . 4101
in lungs, photodynamic action and, . . . 9103
by trypsin, . . . 5783
in muscle, . . . 7674, 13085
by snake venoms, . . . 520, 14859
in tissues due to radiant energy, . . . 3569
resistance to, salts as affecting, rat, . . . 11242
role in anaphylaxis, . . . 11562
in etiology of gastritis, . . . 8753
Schwartzman phenomenon effect on tissue content, . . . 13472
treatment of anaphylactic shock, guinea pig, . . . 12643
wheals induced by, u.v. light as affecting, . . . 795
Hister (p.1876²) *americanus*, on *Tyloderma grandis*, . . . 15897
Histeridae (Coleoptera), p.1876²
Histidine, activity of α -amino group, animals, . . . 7426
derivatives aminoisobutyryl, synthesis, . . . 5764
pressor action, . . . 7770
N- β -alaninyl-L-methyl. (See *Asnerine*.)
N- β -aminopropionyl. (See *Carnosine*.)
Histocyte(s). (See under *Reticulo-endothelial system*.)
Histiotoma (p.1874⁴), n. spp., . . . 17982
Histogenesis (plant). (See *Morphogenesis*.)
Histology, future problems, . . . 2424
technic, book, . . . 36
text book, . . . 4302
Histomonas meleagridis. (See also *Black-head, in turkey*.)
exptl. infection, turkeys, blood changes during, . . . 10494
Histones. (See specific histones, e.g., *Globin*.)
Histoplasma (p.1863⁴), systematic position, . . . 4635
Histoplasmosis, clin-path., in infant, . . . 14867
History of apiculture in U.S.A., . . . 1534
of botanical nomenclature, . . . 1693
of botany. (See also under *Herbals*.)
of cancer, to 1750, . . . 13220
of forest research in Switzerland, 17663
of horticulture in U.S., . . . 13908
knowledge of wood properties, in Rome, . . . 1810
of medicine in U.S.A., . . . 22
of microscopy, . . . 19
of pharmacology, in U.S.A., . . . 21
Hodgkin's disease, brain changes in the Gordon test, . . . 13237
chemotherapy, . . . 17243
effect on lymphocytes, . . . 11322
etiology, . . . 13248
and comparisons, . . . 15232
Gordon test in, . . . 7941
non-specificity, . . . 13240
heterogeneous antibodies in forms, 4458
human brucellosis resembling, . . . 13609
massive collapse and cavitation of lung in, . . . 622
pathoanatomy and hist., . . . 572
prolonged fever in diagnosis, . . . 14909
sex factor in prognosis, . . . 16848
with skin ulcer and osteomyelitis of manubrium, . . . 600
studies, . . . 8154
Hodomy's (p.1882⁴) *alloni guerrenensis*, . . . 8864
Hodophylax (p.1877²) *basingeri*, . . . 6905
Hoffmannia (p.1867³), n. spp., 2828A, 6437
Hog(s). (See *Pigs*.)
Hog cholera, in domestic vs. wild animals, . . . 11750
immunization to by simultaneous method, . . . 2606
dosage as affecting, . . . 17237
superinfection and, . . . 2606
resistance to physical and chemical agencies, . . . 958
virus, resistance to physical and chemical agencies, . . . 958
symptomless transfer through sheep, . . . 2699
Hog cholera bacillus. (See *Salmonella choleraesuis*.)
Hohn-Herrmann test, for intestinal pathogens, . . . 17341
Holboellia (p.1865²), n. sp., . . . 2861
Holocera (p.1877²) *pulverea*, predator of *Laccifer*, India, . . . 14102
Holcus. (See also *Andropogon*; *Sorghum*.)
Holism, in biology, relation to evolution, . . . 14313
human behavior as supporting, . . . 10672
Hollandaise sauce, food poisoning by streptococci in, . . . 8292
Holly. (See *Ilex*.)
Hollyhock. (See *Althaea*.)
Holoptichidae (Pisces), p.1879⁴
Holoptichus (p.1879⁴), from Greenland (D), . . . 3235
Holopyga (p.1878⁴) *taylori*, . . . 12385
Holothuria (p.1872⁴), n. sp., . . . 3294
Holothuriidae (Echinodermata), p.1872⁴
Holothurioidae (Echinodermata), p.1872⁴
blood, accounting for V content of sedimentary deposits, . . . 14155
Holotrichida (Protozoa), p.1868³
Homa. (See *Sarcostemma acidum*.)
Homalota (p.1876²), n. sp., . . . 6867
Homaridea (Crustacea), p.1874²
Homarus vulgaris proteinase of gastric juice and intestinal glands, . . . 347
Homatropine, effect on pupil, . . . 14857
tissue hydrolysis, . . . 2286
Homeostasis, book, . . . 9072
Homeothermes. (See *Poikilothermes*.)
Hominidae (Mammalia), p.1882²
Homocystine as substitute for methionine in diet, vit. B complex and, 16479
in diet, vit. B complex and, 16482
Homoptera (p.1875³), pests of *Deris*, . . . 12238
Hemosiderin. (See under *Pigments*.)
Homostegia (p.1861⁴), n. sp., . . . 15453
Homosteididae (Arthropoda), p.1878³
Homosteus (p.1878³), from Greenland (D), . . . 3235
Honkenya peploides, gas exchange in, 1842
Honey. (See also *Honeybee*.)
cultivated plants for, Norway, . . . 8671
effect on root formation by cuttings, *Thuja* and *Chrysanthemum*, 15714
pollen grains in, . . . 8670
production, mating of bees as affecting, . . . 14152
spectrum, flower vs. forest, . . . 14153
Honeybee(s). (See also *Apiculture*; *Apis mellifica*; *Honey*.)
bee bread, vit. E content, . . . 1532
beehive, protection from *Crematogaster dohrni*, Ceylon, . . . 14151
breeding for temperament, . . . 8672
brood as influenced by *Borophaga*, 15938
by *Phora inersassata*, . . . 15940
cellar wintering, . . . 15936
in Egypt, history, (*A. fasciata*), . . . 8673
foulbrood, American. (See also *Achrobacter larvae*.)
inoculation of larvae with *Bac. larvae*, . . . 1536
conditions affecting, . . . 1535
European, resistance of races to, . . . 1531
larvae infected with *Bac. pluton*, . . . 1537
histology in larvae, . . . 15939
honey production, mating as affecting, . . . 14152
rearing, mating and raising new colonies, . . . 8674
royal jelly, vit. E content, . . . 1532
size of tongue and wing, environment as affecting, . . . 1533
stratiomyid fly larvae from colony, . . . 18011

- venom, toxicity,18148, 18149
wax moths, parasites,15936
Honeybee moth. (See *Achroia grisella*, and *Galleria mellonella*.)
Honeysuckle. (See *Lonicera*.)
Hoof, structure in horses,700
Hooke, Robert, biography,19
Hookeraceae (Bryophyta), p.1863⁸
Hookworm(s). (See also *Ancylostoma*; *Necator*; and other genera of *Ancylostomatidae*.)
anemia, thiamine as affecting,16925
anthelmintic action of tetrachloroethylene,5753
disease, in Hunan,8703
in dogs, immunization by subcut. injection of larvae,4548
epidemiology, Florida,5093
immunity, nature and mechanism,15176
ova, in Chinese, Canada,12357
specific gravity,8708
susceptibility to, tribal differences,11576
Hoplocantha (p.1877⁹), n. sp.,6901
Hoplias malabaricus, spawning induced by pituitary extracts,5895
Hoplitophryidae (Protozoa), p.1868⁸
Hoplocarida (Crustacea), p.1874⁴
Hoplochilus sciureus berbericensis, damage to sugar cane,8459
Hoploplana (p.1869²), of east coast N. America,6798
Hoptopleura (p.1875⁹), sp. on *Pitymys*,5231
Hoplopsyllus anomalus, as vector of plague, control,1004
glacialis lynx, on varying hare,1564
Hops. (See also *Humulus lupulus*.)
corn borer on, Poland,1494
diseases, handbook,8633
Phytophthora disease, in New Zealand,15890
seed content, detn.,17593
seed germination, temp. and moisture as affecting,6588
variety tests, N.Y.,15547
Horcias (p.1875⁹) *nobilis*, injuring cotton,12190
Hordeae, as hosts of Hessian fly,17872
Hordenine, effect on complement fixation,929
Hordeum (p.1864³), (See also *Barley*.)
inheritance of date of ear emergence,14356
linkage studies, review,3940
photoperiodism in,12080
agriocrithon, note,2829
distichum-H. vulgare hybrids, inheritance,84
vulgare, seed, as influenced by high-frequency irradiation,1384
Horisemenus (p.1878³) *floridanus*, hyperparasite of *Apanteles*,5067
microgaster, parasite of *Ancylys comptana*,1523
Horistonotus (p.1876²) *whierii*, dist. life hist. control,5041
Horkelia (p.1865⁴), tax.,1158, 4784
Hormodendrum, spores, incidence in air,6046
Hormogoneales (Algae), p.1860¹
Hormone(s), animal. (See also *Endocrine glands*; *Pregnancy*; *Transplantation*; and under the hormone producing organ, e.g., *Adrenals*, *Pituitary*; under body fluid containing, e.g., *Blood*, *Urine*; under specific hormones, e.g., *Androgens*, *Estrogens*, *Insulin*; under processes and organs influenced by hormones, e.g., *Metabolism*, *Nerves*, etc.)
action, genes as affecting,16601
administration, effectiveness of ant. pituitary powder, orally,14625
of estrone by 7 routes,14618
of testosterone, vehicle as affecting, chicks,14628
subcutaneous vs. percutaneous absorption of sex,9352, 9391
anthrax prophylaxis by,6113
anti-, production and effects, 5631, 77819361, 9368, 9372
.....9387, 9388, 9389
.....9390, 16621, 17175
biological assay, standardization, 6069
control of pregnancy, review,5677
definition,3849
development of refractoriness to enterogastone in dogs,7510
effect on toxicity of hypnotics,12643
gonadal, carcinogenesis relationships,4182
in relation to chromosomal detn. of sex,4386
in invertebrates, book,3849
of corpus allatum of bedbug, 18012
for eye color, *Drosophila*, chemical nature and factors affecting,4399
tests for, in other insects, 7149
monograph,3857
pupation, in fly, chem.,12932
in Lepidoptera,2478, 3885, 5145
prep. and action,12981, 12982
role in aphid wing length,12383
in morphogenesis of insects, 9781
.....9782, 9784
secreted by glands of arthropods,9790
reviews,7069, 14440, 14441
role in modifying action of thyrotrophic hormone on structure of thyroid,11414
in regulation of metabolism,12773
in reproduction,7069
thrombopenia and,5834
vitamins and, book,5551
Hormone(s), plant. (See also *Growth*, *accelerators*.)
activity compared,17688
assay method,15719
auxilin and hormodin, effect on rooting of blueberry cuttings,17684
auxin, activity, pea test for,17687
and physiology,12068
substances masking,10299
artificial parthenocarp produced by,1360
effect on:
Azotobacter,4702
bacteria,2780
plant growth, relation to ethylene,1367
root formation, ericaceous cuttings,1361
gladiolus corms,1362
inactivation, by light,1358
in isolated *Pisum* roots, gradient in,3066
production in excised root tips, 4918
in root nodules of *Phaseolus*,3169
soil microorganisms producing, 17435
synthetic, effect on *Avena*,17678
on root formation,1355
translocation, in *Avena* cells,1356
use in tissue culture,1372
auxin and heteroauxin, role in organogenesis,12064
biotin, estimation method,6570
in cereal grains, iarovization as affecting,17681
chamber for testing,15703
cinnamic acid, activation by u.v. light,6579
colechicine as,6567
from corn, effect on *Ustilago zeae*, 6568
distr., electric potential as affecting,12069
in fruits related to parthenocarp,10801
in leaves, effect of light on production, *Fatsia*,15721
light as affecting, tomato,17682
in seed and seedlings, *Pyrus* and *Prunus*,12072
effect on:
activity of gonadotrophin,9283
algae,15705
callus formation, fruit trees,15709
C metabolism and sporulation,15761
Melanospora,17686
growth,12063
of *Allium* roots,8507
of pollen tubes, *Prunus*,6575, 6576, 17679
when applied in spray or water,15717
kudzu cuttings,12071
phototropism, *Avena*,8568
tropisms of roots, Cu as affecting,6578
wheat when applied as dust on seed,12070
extraction and factors determining amount present,15711
florigen, causing photoperiodic response in plants,8571
flower-promoting,15741
extraction and transmission by grafting,15713
in garlic,17667
Hormone (continued)
gene for absence, *Petunia*,16185
growth, effect on bud formation, flax,3061
on root formation, ornamentals,3063
use of *Colletotrichum* in testing, 3067
in horticulture and agriculture,3064
growth-promoting activity, compared,13989
sols. vs. vapors,13990
horticultural applications,6573
indoleacetic acid, *Avena* detection techniques compared,6566
colorimetric quantitative detn., 15712
effect on:
bud growth,6577
bud initiation, flax,3061
cabbage, N nutrition as affecting,4917
electric potential, *Didymium* plasmodium,15718
Escherichia coli growth,2747
exudation, *Pisum* and *Helianthus*,4919
growth and metabolism, bean cuttings,10304
meristem and root formation, kale,8570
nodule formation in radish seedlings,12067
plant growth when used as spray,13986
production of wound hormones by yeast,3062
respiration and translocation, beans,4918, 4920
root formation,1357, 3059
rooting of cuttings,15710, 15715
translocation,12069
in cuttings, relation to polarity,13985
in plant tissues,15720
use in tomato culture,15708
indoleacetic and naphthaleneacetic acids, effect on polarity, horseradish root,10303
indolebutyric acid, effect on rooting of cuttings,13982, 13983
of pecan trees,13987
mechanism of action,6569
methods of applying to stimulate growth,13987, 13988
naphthaleneacetic acid, methyl ester as growth inhibitor and producer of epinasty,12066
 β -naphthoxyacetic acid as,15704
nature and role,17702
produced by bacteria supplied with amino acids,13981
pyrimidine as,6591
relation to geotropism,4921
to parthenocarp,10800
to photoperiodism, *Xanthium*,4929
to phototropism, *Helianthus*,6515
to sex,6558
to wound-cambium formation, *Ricinus*,13984
review,6574
role in blossoming,8571
in vernalization of rye,6565
sexual, in *Achlya*,17685
of algal gametes, crocetin dimethyl ester as,10305
concerned in peritheciium formation,2810
in primitive alga,10107
substances acting as, in vapor form,17688
synthetic, effects compared with those of X-rays,10302
effect on rooting of cuttings,11991
of forage plants,10306
rate of transport,10307
translocation mechanism,17712
use with pecan cuttings, new method of applying,12073
wound, production by ultraviolet, 1359
by yeast when treated with heteroauxin,3062
Horse(s). (See also *Equus*.)
abortion, virus (?) etiology,15377
virus or dietary etiology (?),8324
African horse sickness, surfen-C therapy,6155
anatomy, book,15002
anesthesia, review,1019
aneurysms, etiology,1565
antitoxin production in, flocculation relation,8154

Horse (continued)

- Arab, body measurements and uses, 8067
- ascarids, extracts, toxicity, 14177
- Bang's disease transmitted to cattle by, 11734, 11743
- birth wt., relation to dam wt., 17080
- blood, hemolytic principle in, demon-
stration and properties, 18445
- bone growth in draft vs. light, 11484
- Borna disease, infectious anemia com-
pared, 4605
- virus viability, 4606
- carbohydrate of pseudoglobulin, non-
specific nature, 2524
- cecum, microflora and fauna and cyto-
clasis in, 4671
- Corynebacterium equi* from, serol. typing, 13862
- crosses, maternal effects in, 10740
- deficiency disease in, 17384
- deformity (hereditary) of iris and
corpus ciliare, 2694
- dermatosis, due to *Scopulariopsis*, 6338
- diseases, sulfanilamide therapy, 11720
- draft colts, food intake and gain, 11493
- echinococcus, rabbit resistant to, 1550
- encephalomyelitis. (See *Encephalomye-
litis*.)
- estrone excretion after injection, 3944
- feeds for, old vs. young alfalfa, moist
vs. dry, 8073
- foals, purulent arthritis in, due to *Sal-
monella typhimurium* var. *copen-
hagen*, 8320
- strongylosis, natural factors control-
ling, 17890
- fossil, Oligocene as critical period for, 5081
- genital skin, innervation, 11395
- glandular tissue, elements in, spectro-
graphic analysis, 13315
- hoof, structure, 700
- hormones in saliva and urine, 11071
- hydatid cyst, exptl. infection in mice, 10486
- hyperkeratosis in, case study, 11732
- infectious anemia in. (See under
Anemia.)
- lameness, diagnosis and therapy, 15357
- leishmaniasis in, Sudan, 6740
- milk and colostrum, comp., 11493
- milk concretions in galactophore sinus
of mare, 8317
- nematodes, destruction by fungi in
culture, 14172
- Nuttallia* in, morphology and vectors, 6756
- origin, 11490
- Parascaris* in heart, 1566
- parasites, Hawaii, 17897
- "pinto," spotting character, genetics, 92
- pregnant, hormones in urine and blood, 5675
- Przewalsky's, relation to the tarpan, 11490
- rabies transmission by bats to, 9956
- saliva, factors affecting urea in, 14851
- serum, colostrum substitute, 2485
- Shire-Shetland pony crosses, maternal
effects, 10740
- skeletal diseases, nutritional relations, 15365
- skulls, taxonomic study, 4406
- sterility in mares, 2487
- Streptococcus zymogenes* in intestines, 8342
- strongyle egg counts, vs. larval culture
method, 1543
- strongyle parasites, 15996
- strongylosis, Brazil, 1565
- Strongylus* in, pH and pH of cecum and,
 10512
- times in, cauterization for, 11731
- trichostrongylosis in, 15950
- trypanosomiasis, 12259
- tumor of larynx in, pathology, 4686
- urinary and blood bases in, 13012
- water consumption, effect on metab-
olism, 8072
- Horse-radish, polarity of roots, plant hor-
mones as affecting, 10303
- vapors, effect on bacteria, 2724
- Horsehoe crab. (See *Limulus*.)
- Horsfeldia* (p.1866), tax., 4780, 15505
- Hortega cells. (See *Neuroglia*.)
- Horticulture. (See also *Agriculture*; *Flori-
culture*; *Fruit(s)*; *Fruit trees*;
Orchards; *Pomology*; *Ornamentals*;
Vegetables; and particular horti-
cultural plants, e.g., *Apple*, *Potato*,
and under subjects, e.g., *Seed*,
germination.)
- crops and vars., Argentina, 4877
- history, Fla., 8495
- in U.S.A., 13908
- research in, Japan, 1269
- in Scandinavia, 1227
- spraying practice, cooperation in, 12472
- textbook, 10220
- use of growth hormones in, 3064
- Hospitals, formaldehyde-vapor steriliza-
tion in, efficacy and technic, 15323
- Host(s). (See *Parasitism*.)
- Hostimella* (p.1864), new spp., 13716
- Hot springs. (See *Water(s)*, *thermal*.)
- HOUDMERUS (Nemath.) (p.1870) bam-
busicolae, n. comb. and n. sp., 10546
- House(s), invasion by insects, 10421
- psocids in, control, 14101
- sprays for sand flies in, 12217
- House fly(ies). (See *Fly*; *Musca domestica*.)
- Houttuyn, critical review of his n. gen.
and n. sp., 11855
- Howea*, in cultivation, 11858
- HUEA (Fungi) (p.1862), 6364
- Hugeria erythrocarpa*, note, 15499
- Human. (See *Anthropology*; *Anthro-
pometry*; *Cranimetry*; *Man*.)
- Humates, nitrogen-fixation in media con-
taining, Fe and Mo as affecting, 10070
- Humic acid, in peat, extraction, 13862
- neutralization curves, 17603
- Humidity. (See also *Evaporation*; *Water*.)
- body temp. and, man, 3670
- in coniferous woods, in relation to plant
cover distr., 5382
- in cotton field, irrigation as affecting,
 2931
- effect on:
- anesthesia, mice, 11214
- avocadoes in storage, 13915
- body heat dissipation, 12643
- distr. of *Calluna* (Dicot.), 2909
- flora population on rodent, 1514
- granary beetle, 5047
- hatching of insect eggs (*Antheraea*), 3223
- hibernation and mortality of grain
feeding pentatomids, 12580
- insect succession in dead pine and
oak stumps, 10773
- metabolism, starved beetle larvae, 9179
- photosynthesis in forests, 4931
- pitting of vegetables in storage, 13893
- pollen viability, fruit trees, 13890
- reproduction, *Strongyloides*, 15959
- root hair, 8565
- sap yield of nipah palm, 12569
- seed germination, Lima bean, 15619
- seed viability, 6583, 8572, 15726
- sexual maturity of pullets, 15113
- skin temp., man, 3665
- sporulation of *Eimeria* oocysts, 6725
- storage, cut carnations, 13901
- SO₂ injury to plants, 6616
- surface drying of frozen poultry, 17093
- vegetables, relation to vars. grown
in given locality, 2990
- viability, of cereals in storage, 17743
- of gladiolus pollen, 17695
- water balance of range cattle, 15101
- evaporation rates, in forests and open
areas, 10763
- in incubators, measurement, 785
- of leaf tissue and air, effect on transpi-
ration, 12090
- at low temps., apparatus for, 10764
- measurements, of evaporation, 10758
- hygrometer for, 3482
- reaction of cockroach, 3484
- in relation to moss communities on
trees, 10757
- to red deer, 3535
- relative, effect on wood destroying
fungi, 6337
- methods of measuring within termite
mounds, 1829
- morning and midday in So. Africa, 8979
- optimum, for development of nun
moth, 3194
- response of mosquitoes to, 6707
- role in grassland community, Iowa, 3500
- Humming birds, classification, 18073
- wing vibrations in flight, 14303
- Humoral. (See *Hormones*.)
- Humulus lupulus*. (See also *Hops*.)
- Penicillium humuli*, on, 6338
- Humus. (See also *Nitrogen*; *Organic
matter*; *Soil*.)
- acids from, effect on underlying soils, 13854
- decomposition, temp. and moisture as
affecting, 15666
- P transformations in, 17423
- effect on absorption of ammonium com-
pounds by plants, 17620
- on root development and chlorophyll
formation, 17619
- forms in beech stands, Denmark, 5383
- hypochlorite oxidation, 17432
- origin and chemistry, book, 6502
- in relation to soil microfauna, 1290
- in soils, rainfall as affecting, 13858
- Hunger. (See also *Appetite*; *Fasting*;
Inanition.)
- contractions of stomach. (See under
Stomach.)
- satiety and, insulin-adrenalin theory, 12901
- Hunter, John, biography, 7078
- Huro, tagging expts., 159
- salmoides, parasites, 15948
- Hurricane, damage to trees, effect on
insect infestation, 12205
- Hutchinsia* (p.1860) *corymbifera* (*Streblo-
cladia* c.), 4729
- Huxley, Thomas Henry, biography, 16146
- Hyacinth, mosaic, cucumber virus 1
from, 1434
- relic and relational coiling in chromo-
somes, 1709
- Hyacinthus* (p.1865), (See *Hyacinth(s)*.)
- Hyalomma*, as vector of nuttalliosis, 6756
- aegyptium*, from pig with piropasmosis,
 12246
- Hyalosphenia* (p.1868), n. sp., 10526
- Hyastenus* (p.1874), tax., 1616
- Hybognathus regius*, breeding habits, 14287
- Hyboryncus* (p.1879) *notatus*, oxygen
threshold, 5411
- reproduction and growth, 3395
- shelter in Michigan lakes, 9060
- Hybrid(s). (See also *Chimeras*; *Genotype*;
Heterosis; *Inbreeding*; *Plant breed-
ing*.)
- Agropyrum-Triticum*, dominance and fer-
tility, 1748
- Anopheles maculipennis* races, expts., 5054
- Aster*, cytology and taxonomy, 6428
- Avena*, aberrant leaf width in, cytology,
 5292
- bananas, 1259
- barley, inheritance of date of ear
emergence, 14356
- Bromus*, 67
- cattle-yak, blood comp., 8954
- Chinese-Mulatto, physical character-
istics, 9788
- Chinese-white and negro-white, physical
heredity, 5352
- Colaptes*, 86
- corn, European corn borer as affecting,
 8644
- for Ohio, 2959
- tests, 15536
- Crepis*, morphology, geographical distr.,
 63
- cytology, genetics, 10731
- Digitaria*, chemistry of pollen, 7968
- dog, gastric mucosa after hypophyse-
ctomy, 12643
- spontaneous activity in, 12643
- Drosophila*, phylogenetic significance,
 5337
- testis size, 5350
- in *Eu-Oenotheras*, cytological and
genetic analysis, 16187
- fern, compared with parent spp., 1099
- 1110
- fertile, as result of colchicine, 8941
- 14364
- Formosan masked pig-Berkshire,
immuno-genetical studies, 7160
- fragrant, *Gladiolus*, 10729
- Gossypium*, morphology and fertility,
 7129
- Hordeum*, inheritance, linkage, 84
- Hyoscyamus*, fertile, colchicine-induced,
 70
- Hypericum*, polyploidy and apospory,
 16183
- intergeneric, *Aegilops*, *Triticum*, *Aegilo-
triticum*, progenies, 7128
- interspecific, recombinations in, technic
for estimation, 14955
- intraspecific, *Galeopsis*, sterility and
chromosome pairing, 12507
- Iris* (Monocot.) analysis, 4771
- Kuhn-Mangold sugar beets, inheri-
tance, 14357
- Lactuca*, cytogenetic studies, 5294
- Larix*, triploid, economic value, 5321
- Macropodus*, color pattern, 5347
- Magnolia*, note, 6427
- mammalian, sex ratio, 3465
- merogonic amphibian, development and
nuclear conditions, 9768

SUBJECT INDEX

Hybridization-Hydroponics

- Mollisia* "formosa," matroclony, 5346
natural cross in forage grasses, 1149
Nicotiana, 13797
induction of polyploidy by colchicine, 16188
Oenothera, chiasmata, crossing over, 5330
chromosomes, 16170
perithecial, in *Neurospora*, 2810
Pisum, cytology, 5328
plant, and cytoplasmic constancy, 78
Populus, cytology, 5291
potato, and resistance to scab and wart disease, 65
Rehobother, age changes in faces, 8016
resistance, to corn borer in maize, 10417
Salmo \times *Salvelinus*, 12426
sheep-goat, chromosome studies, 54
Silene (Dicot.), 10139, 10140
10141, 10142, 10143
Solanum, chromosomes and inheritance, 12517
cytology, 80
specific and racial, of *Epilobium*, reciprocal differences, 5310
sterile, of *Gladiolus* \times *Antholyza*, 5322
of *Triticinae*, amphidiploids induced by colchicine, 7134
Triticum, backcrosses, chromosomes and endosperm development, 7130
doubling chromosome number by heat, 12536
Triticum-Haynaldia, crossing over between semihomologous chromosomes, 7098
Triticum-Secale, chromosomes and fertility, 1756
cytogenetics of non-amphidiploid derivatives, 1749
inheritance of hairy necks, 1754
Triton-Salamandra, early development, cytology, 11453
mitosis in, 10738
value, in relation to origin of inbred lines, maize, 5332
of *Vernonia* in Missouri, 10156
Viola, cytology and morphology, 14858
wheat, variation in somatic chromosome numbers, 43
wheat-rye, chromosomes, 42
inheritance of hairy in, 1754
Hybridization. (See also *Heterosis*; *Hybrid*.)
in *Apocynum venetum*, 77
attempts, *Avena* spp., 12530
of *Citrus*, in Philippines, 85
effect on distr. of *Crepis* (Dicot.), 4777
and irregularities in meiosis, *Melandrium album*, 10716
numbers and ratios of phenotypes and genotypes in, 3454
peas, for new vars., 12524
of *Populus*, 1758
Hydathodes. (See also *Guttation*.)
structure and development in *Spartina*, 11929
Hydatid(s). (See also *Echinococcus*.)
cyst, rupture and spread, 10513
disease, diagnosis by rabbit *Cysticercus* antigen, 17240
non-specificity of test for, 14168
rare sites, Turkey, 10482
relation to *Echinococcus* in dogs, Egypt, 10480
in wildlife, need for data, 15969
sand, from horse, infectivity for mice, 10486
infectivity for rodents, 12248
Hydnaceae (Fungi), p.1862³
coralloid, relationship to *Clavariaceae*, 15462
Hydnocarpus. (See also *Chaetmoogra* oil.)
preparations, irritant effects, 17268
Hydnophytum formicarum, leaf, stem and flower morphology, 2916
Hydnium (p.1862³) *septentrionale*, Norwegian habitats, 8395
Hydra (p.1869³), disposal of unused interstitial cells of ovary, 11463
ectodermal and endodermal layers, rôle in regeneration when cultivated separately, 5971
attenuata, egg fertility, 8727
embryo transportation, 8728
cauliculate, 8726
Hydrachnidae (Arachnida), p.1874³
Hydrachnoidea, attacking *Simulium* spp., 15930
Hydracina, alleged dissolution of snail shells by, 15982
communities, components, ecology, 15982
Hydrangea (p.1865⁴), n. combs. and n. sp., 15486
Hydrastine, synergic with HCN, 5738
Hydration. (See also *Swelling*; *Water*, *balance*; *Water*, *relations*.)
of mucin, measurement, 9083
Hydrastete (p.1864³), n. spp., 11864
Hydrocinurus (p.1871³), (Cb), n. sp., 10555
Hydromenidae (Lepidoptera), p.1877⁴
Hydrobatidae (Aves), p.1831¹
Hydrobiology. (See *Ecology*; *Limnology*; *Oceanography*; *Plankton*; *Water*; etc.; under *Lake(s)*; *Streams*; etc.)
Hydrocarbons, biogeochemistry, photodynamic activity of urine of mice treated with, 18652
carcinogenic, chem., 7824
effect on:
amphibia, 11284
planarian tissue regeneration, 18875
rapid production of tumors, 568
morph. of induced tumors, 14877
review, 4182
in therapy of tumors, 13211
carcinogenic vs. non-carcinogenic, effect on:
Escherichia communior growth, 13703
subcutaneous tissue, mice, 14900
tissue cultures, 16846
polarographic curves, 13238
chlorinated, effects and permissible conc., 5872, 11858
effect on tension current, carcinogenesis and, 11902
halogenated, decomposition by smoking, 11859
fatal syncope due to, dog, 14818
polycyclic, endo-succinic acids derived from, hemolytic action, 7893
Hydrocarbyaceae (Dicotyledones), p.1866³
Hydrocephalus, internal, in colloid tumor of third ventricle, 16873
in glioma of pons, 16829
intracisternal inj. of colloidal kaolin causing, 2319
intracranial pressure in, 16407
subdural, in calf, 6256
Hydrocharitaceae (Monocotyledones), p.1864²
Hydrochloric acid, effect on heart, frog, 491
Hydrochoerus capibara, 2 *Eimerias* from, 12276
Hydrocupreidine, effect on bladder, 5747
on heart, 5746
Hydrocupreine, effect on bladder, 5747
on heart, 5746
ethyl. (See *Ethylhydrocupreine*.)
Hydrocyanic acid. (See under *Cyanides*.)
Hydrocybe (p.1862³), tax., 2803, 8403
Hydrofluoric acid burns, therapy, 11360
Hydrogen, -acceptors, in bacterial hydrogenation, 15426
effect on glucose fermentation by *Aerobacter*, 11768
bisulphide, silver foil as indicator for, 4664
production by *Escherichia coli*, 17463
symbiotic, nitrogen fixation inhibited by, 8353
Hydrogen cyanide. (See under *Cyanides*.)
Hydrogen ions. (See also *Hydrogen-ion concentration*.)
adsorption by serum globulin and its antibody, 802
range of thermal algae, 6385
Hydrogen-ion concentration, of bacterial cultures, electrical conductivity correlated, 2745
of blood. (See *Blood*, pH.)
in buffer precipitation test for malaria, 14194
of caecum, *Strongylus vulgaris* and, horse, 10512
of *Citrus* fruits, rootstock as affecting, 1244
of conifer leaves, relation to taxonomy, 12118
of culture media, effect on serological reactions, 923
for *Deschampsia*, 1352
detn., within erythrocytes, 16337
with hemoinometer, 7355
methods, 5425
in milk and whey, 13363
of skin surface, 10862
drip formation in meat and, 1031
effect on:
absorption of prune pure, by plant cells, 13973
acid-resistant bacteria, 6272
amylase activity, in leaves, 12106
base content, corn, 13979
blood vessels, 13121
catalase activity, *Aspergillus*, 15779
deposit of oil sprays, 10460
detn. of thermal death point, 5009
Hydrogen-ion concentration (continued)
effect on (continued)
enzyme activity, helminth extracts and, 17891
formaldehyde inhibition of serum precipitation with polysaccharide, 848
fungus growth, 972
growth of *Polyporus annosus*, 6686
larval development of *Graphidium* (parasite nematode), 10548
leucocytes, 5818
life span of *Urechis* eggs, 12659
Opisthorchis lifespan in vitro, 8688
organic acids, in corn, 12116
O₂ consumption of tissues, 16467
permeability of plant cells to urea and glycerol, 1363
phototropism in tadpoles, 7615
polarity of eggs, *Fucus*, 3078, 3098
protein extraction, from seeds, 13837
rhizopod types found, Lappland, 10526
sensitivity to light, *Peranema*, 12653
stability of posterior pituitary principles, 16611
Strongylus in vitro, 15975
of forage crops, relation to feed value and botanical comp., 4840
of heteroauxin, effect on root formation, 1357
of living cells, 12655
of muck soils, N as affecting, 1248
of muscular tissue, 9798
of myiatic wounds, effect on recovery and oviposition of *Cochliomyia*, 8659
sheep and goats, 3200
optimum, for tyrosinase, from potato, 14029
of plant cells, relation to storage of methylene blue, 4922
relation to vital staining, 3068
of plant saps, birch and maple, 1395
relation to toxicity of Pb and Zn, for forest trees, 1410
for rice, 1351
scale, meaning and standardization, 547, 5480
of sea water, effect on mobility of ions in *Habycystis* protoplasm, 3076
in shake media, detn. at different levels, 11673
of silage, all types, 6001
of soil. (See *Soil*, reaction.)
for truck crops, 2983
of urine. (See under *Urine*.)
of vaccinia elementary bodies, 2610
of *Valonia* sap, relation to accumulation of ammonia, 10309
to exit of ammonia, 10310
values of Norwegian lakes, 12615
of vibrio cultures, 6316
of waters, effect on snail distr., 1261
for greenhouses, apparatus for condensing, 6522
Hydrogen peroxide, in bacterial cultures, detn., 11798
formation in organic extracts, under action of light, 6601
irritant action, 541
reaction on stigmatic surface, 3459
Hydrogen selenide-relations with ferri-hemoglobin, 1952
Hydrogen sulphide, effect on eye, 13284
on metabolism, algae, 15781
in viscose rayon mfg., toxicity, 7919
Hydrolimaz (p.1869⁴) *grisea*, rediscovered, 8731
Hydrology, need for research in, 109
problems, value of tree ring analysis in, 14388
Hydrolysis. (See also *Digestion*; *Enzymes*; *Glycolysis*; *Proteolysis*; and under substances hydrolyzed.)
of esters in subcutaneous phase, 7438
by phosphatases, in higher plants, 4950
Hydromedusae, nematocysts, England, 3278
Hydronephrosis, hypertension and renin in rat, 4100
Hydrophilidae (Coleoptera), p.1876¹
Hydrophiloidea (Coleoptera), p.1876¹
Hydrophobia. (See *Rabies*.)
Hydrophyllaceae (Dicotyledones), p.1867¹
Hydrophyllum (p.1867¹), n. combs., 8442
Hydrophyte(s). (See also *Aquatics*.)
growth, 1371
transpiration and osmotic pressure, 4940
Hydroponics. (See also *nutrient solutions* under *Nutrition (plant)*.)
advantages and technic, 1228
critique, 15581
technic and possibilities, 6560

- Hydropotes* (p.1883⁴) *inermis*, nematodes of,1604
Hydrops. (See *Edema*.)
Hydrops fetus universalis, hormones in etiology,2170
Hydropsyche (p.1876⁴), sp. ecology, 15930
Hydropsychidae (Trichoptera), p.1876⁴
Hydroquinone compounds, vit. E potency,12869
 Hydrostatic pressure. (See under *Pressure*.)
Hydrotheria (p.1862³) *venosa*, from Virginia,13739
Hydrovatus (p.1876⁴), n. sp.,10589
Hydroxybutyric acid. (See under *Butyric acid*.)
Hydroxyethylapocupreine, effect on pneumococcal pneumonia,4233
 pharm.,13178
Hydroxylamine, effect on types of lymphocytes,11322
p-Hydroxy-m-acetylaminophenylarsinic acid, As excretion, after admin., rabbit,16814
 toxicity, mouse and rabbit,16815
Hydroxyphenylisopropylamines, effect on circulatory system,16782
Hydroxyphenyltrimethylammonium dimethylcarbamate ester, effect on cardiac action of epinephrine, 7736
Hydroxypyruvic aldehyde, bacterial utilization,2757
 compounds as antidotes in HgCl₂ poisoning,13178
 metabolism, of alcoholate of trimer, rat,3685
Hydrozoa (Coelenterata), p.1869²
Hydraphantes (p.1874⁴), new sp.,1618
Hyena(s), demarcation of territory by secretion of anal glands,10760
 Hygiene. (See also *Health*; *Industrial hygiene*; *Sanitation*; etc.)
 biological, in stables,2495
 books,4655, 8303, 10023
 development, in Canada,11678
 of government work, survey,3289
 organization for, Brazil,13635
 programs, appraisal,15348
 public, basophilia due to leaded water,14995
 nitric oxide produced by gas burners,11370
 public health laboratories, regulation in Conn.,6215
 of Rio de Janeiro population,13638
 social insurance and,13655
 in South Sea Islands, climate as affecting,14391
Hygrometer, dew-point, for use at low temps.,10764
 for measuring humidity of upper air,3482
Hygrophorus (p.1862³), n. spp.,8403
Hyla (p.1880⁵), blood cell morphology and blood coagulation time,5884
 chromosomes, form and number,10722
 coccyeal lymph hearts innervation,15014
Isospora in intestine,12275
regilla, anus formation,13336
 development after ablation of pars buccalis of pituitary,8045
 egg, localization of neural inductor and tail mesoderm in,758
 eye rudiment, bilaterality, factors affecting,739
 presumptive ectoderm, increased temp. as affecting,13334
reeschmanni,6978
rubra, exptl. infection with *Isospora*,12275
Hyla (p.1878⁴) *hirticaudus*,14265
Hylostes (p.1876⁴) *ater*, association with wood wasp,15926
Hylemyia antiqua, control of, mercury chloride,10408
Hylidae (Amphibia), p.1880⁵
Hylotates. (See also *Gibbon*.)
 material in American collections, catalogue,2459
Hylocerus (p.1866³) *undatus*, stem and root of, anatomy,13787
Hylocharis (p.1881³), food habits,9064
Hylocichla (p.1882⁴) *minima dicknelli*, color forms,8852
 dist., and life hist.,8852
minima, color forms,8852
Hylotrapes (p.1876³) *baicalus*, bionomics and control,1511
Hylogopinus (p.1876⁴) *rufipes*, larval development of,10426
 HYMANIA (Platyhelminthes) (p.1869²)
 pyrrherchi,15939
Hymenogastraceae (Fungi), p.1862⁴
Hymenolepididae (Platyhelminthes), p.1870⁴
Hymenolepis (Pter.) (p.1863²), n. spp., 8421
Hymenolepis (Platyh.) (p.1870⁴). (See also *Taenia*.)
 new spp., 14209, 15987, 15988, 15992
 Raigan therapy of infestations, 9924
diminuta, epidemiology, Florida,6742
 in man, Australia,8683
 new interm. host (*Embia*),14192
 in rat, preunition and,10485
exigua, life history,10477
nana, epidemiology, Florida,6742
 incidence, Cuba,6720
 of man, in rodents,10507
passeris in English sparrow,1593
Hymenoloma (p.1863²), tax.,11844
Hymenophyllaceae (Pteridophyta), p.1863²
Hymenophyllum (p.1863²) *kuhnii*, in Rhodesia,8423
tunbridgensis, in S. Carolina,17509
Hymenoptera, p.1878⁴. (See also *Ants*; *Bees*; *Wasps*.)
 Callimomidae, comparative morph. and phyl.,1632
 parasitic, larvae and pupae, survival of refrigeration,1520
 sex ratio, host size as affecting,8668
Hymenostomum (p.1863²), transfers from,4748
 Hyoscine. (See *Scopolamine*.)
l-Hyoscyamine, isomers, effect on nervous system,16773
Hyoscyamus (p.1867²) *muticus* ssp. *brevibracteus*,15511
niger, grafted onto *Nicotiana tobacum*, effect on time of blooming, 1752
H. albus hybrids, fertile, colchicine-induced,70
 nitrate storage,116
 vein-banding virus, symptoms and properties,1442
Hyospathe (p.1864⁴) *bittieri*,2831
Hyostromylyus rubidus, control, swine,17908
Hyparrhenia (p.1864⁴), n. spp., 2828, 8427
Hypeninae (Lepidoptera), p.1877⁴
 Hyperglycemia. (See under *Blood, sugar*.)
 Hypericaceae (Dicotyledones), p.1866²
Hypericum (p.1866²), tax.,4800
perforatum-H. acutum, quadrangulum, pulchrum hybrids, apospory and polyploidy,16183
 Hyperkeratosis, equine, case study, 11732
 Hypermastigida (Protozoa), p.1868³
 Hyperoaria (Marsipobranchii), p.1878³
 Hyperpnea. (See under *Respiration, alveolar*.)
 Hypersensitivity. (See *Allergy*.)
 to drugs. (See under *Drugs*.)
 Hypersensitivity. (See also *Photosensitivity*.)
 to catgut, in wound disruption,9883
 chemistry and immunology of ragweed pollen proteins,2542
 to cod liver oil in pigs,2707
 contact-type, in skin vs. mucous membrane,13424
 to dermatophytes, in laboratory animals,6203
 to drugs,873
 dust-atoxigen, review,8160
 eczematous, patch-testing for, substances and concs. used in,13474
 effect on tuberculosis course,829
 heterologous, in different stages of immunity,17162
 to horse serum, passive transfer negative in guinea pig,13394
 hypophysectomy as affecting,17181
 to insulin forms,6034
 in malaria,8684
 to jute,6105
 in monkey,924
 to mushroom fly, asthma due to,6059
 passive, in monkey,8161
 to pinene,805
 to poison ivy,1544, 13483
 pollen antigen-antibody reaction, effect on Schwartzman phenomenon,796
 to procain anesthetics, chemical structure and,13424
 to Seibert's tuberculin protein derivative modified,2592
 to silk,15129
 simple chemical compounds inducing,873
 skin, serum inducing, fractionation,6037
 skin vs. clinical, to foods, atopic reagins and,13513
 to tobacco, in coronary thrombosis,6056
 in phlebitis,6056
 in thrombo-angiitis-obliterans,6056
 to toxic serum extract of streptococci,11559
 to tuberculo-proteins, without infection,900
 of tumors, to bacterial carbohydrates, rats,4196
 types and problems,17204
 vit. C relations, review,8160
 window patch test and applications,17145
 Hypertension. (See *Blood pressure*.)
Hyphaene (p.1864⁴), in Western Africa,6383
Hypheothrix (p.1860⁴) *aikenensis*, transf. to *Schizothrix*,15437
Hypheosobryon (p.1879²), n. spp.,8812
 Hypnaeae (Bryophyta), p.1863⁴
 Hypnosis. (See also *Defense, reactions*.)
 induction by manipulation, immobilization, and visual field inversion, monkey,3985
 Hypnotic(s). (See also under specific hypnotics, e.g., *Barbital*.)
 diacylurea as,13178
 toxicity, temp. and hormones as affecting,12643
 trihalogenated alcohol derivatives as,509
 Hypochlorite, -oxidation, of plant residues,17432
 sodium, resistance to, by pathogenic vs. saprophytic mycobacteria, 8277
 Hypochnaceae (Fungi), p.1862³
Hypochnus (p.1862³), history, validity,15459
Hypochoeris (p.1867⁴), n. sp.,15500
Hypochytrium (p.1861²) *catenoides*, 17490
 HYPOCLINE (Fungi) (p.1862⁴),17500
 Hypocotyl. (See *Embryo (plant)*; *Embryogeny*; *Seed*; *Seedling*.)
 Hypocreaceae (Fungi), p.1861⁴
Hypocreadium (p.1870²) *patellare*,6803
Hypoderma (p.1878⁴), pupae of as affected by moisture,5057
 bovis, injury to cattle,12228
Hypodermopsis (p.1861⁴) *smilacis*, 11814
 Hypoglossal nerve. (See *Nerve, hypoglossal*.)
 Hypoglycemia. (See under *Blood, sugar*.)
Hypoglycus (p.1882²) *regalis* (N.),14311
Hypolytrum (p.1864⁴), n. spp. and n. combs.,11873
Hypomyces (p.1861⁴) *porotheliformis*, on *Ganoderma*,8399
 Hypophysis cerebri. (See *Pituitary body*.)
Hypopteromalus (p.1878³) *tabacum*, hyperparasite of *Apanteles*,5067
Hyposoter (p.1878³) *pilosulus*, oviposition and sex ratio,18030
 Hyposulphite. (See *Thiosulphate*.)
 Hypotension. (See *Blood pressure*.)
 Hypothalamus. (See under *Brain*.)
 Hypotrichida (Protozoa), p.1868³
 Hypoxanthine, effect on growth, *Obelia*,2046
 isolation from earthworm,1916
Hypoxylon barkeri, on *Acer* spp.,14039
Hypoxystus (p.1874⁴), n. sp.,6861, 6863
Hysoblenius (p.1880⁴), characters and distribution,10625
Hyttis (p.1867²), n. spp.,17521
Hyracoidae (Mammalia), p.1883³
Hyrae (p.1883³), absence of gallbladder in,704
 Hysteriaceae (Fungi), p.1861⁴
Hysterium (p.1861⁴), tax.,11812, 11819
Hysterocteneta (p.1863³) *eiseniae*, from earthworm,10514
Hysterolectitha (p.1869⁴) *xesuri*,6803
Hysteronura setariae, as vector, of sugar cane mosaic,15832
 HYSTRICOPHORA (Dicot.) (p.1867⁴), in Vernoniaeae,15483
 Hystricidae (Mammalia), p.1883³
Hystrix californica, susceptible to Hessian fly,17872
 I
 Iarovization. (See *Vernalization*.)
 Iatrogenic state, effect on reinfection in allergic state after BCG-immunization,8102
Ibalia (p.1878³) *leucospoides*, parasite of *Sirex*, life hist.,15926
Iberis, photoperiodism in,12080
Ibis ibis, new tapeworm in,15992
 IBLANIA (Coleopt.) (p.1876⁴) *solissima*, from snow field,5130

Ice-Inanition

- 2013—

- Inanition (*continued*)
 effect on (*continued*)
 milk fat,306
 size regulation of regenerating tails
 and eye grafts, *Ambystoma*,
 11374
 somatic modification, *Drosophila*,91
 of insects, longevity during,10771
 phagocytes originating in ovarian
 follicles during, *Rana*,4370
 protein and amino acid metabolism in,
 12643
 protozoan reorganization in,3259
 pseudohypophysectomy produced by,
 12643
 tissue proteases in blood and urine as
 indication, dog,5442
 Inbreeding. (See also *Heterosis*; *Hybridiza-*
tion; *Hybrids*.)
 continued, in maize,12582
 crossing and selection, maize,16172
 degeneration in livestock, as determined
 by judging,17069
 deviations from expected frequencies
 in theory,5301
 effect on self-sterility, *Raphanus*, *Bras-*
 sica,10733
 formula for estimating amount in
 natural populations,1735
 in Poland-China pig,8956
 practical utilization, in U.S.A.,14859
 in relation to myopia, man,3470
 and selection, effect on rate of attaining
 homozygosis,7140
 Incineration. (See also *Ash*.)
 under the microscope, technic,3409
 Inclusion bodies. (For specific studies, see
 under diseases, e.g., *Mosaic*, *Rabies*,
 Variola, and under *Virus*.)
 of blennorrhæa,4594
 from bovine mastitis, tissue culture,
 15254
 in canine vs. fox distemper,11238
 coccoid, in ticks,11233
 in cowpox (exp.),9945
 crystalline, in protozoa,3254
 cytoplasmic, in *Lecudina brasili* (gre-
 garine),1732
 Donovan, culture and relationship,
 13599
 of ectromelia,4593
 elementary, of foot-and-mouth disease,
 6167
 of psittacosis,15235, 15236, 15237
 of rabies virus,4588
 of rheumatic fever,17130
 of trachoma,2628, 8205
 of vaccinia,4593, 15238
 pH stability,2610
 relation to elementary bodies in
 rabbit cornea cultures, 8192
 ultrafiltration,2624, 2627
 of vaccinia virus cultures in rabbit
 cornea, relation to vaccinia
 inclusion bodies,8192
 of viruses, stain technic,11618
 of epizootic fox-encephalitis,6168
 of erythrocytes, review,6158
 in liver cells of mouse,4580
 in lymphocystis of fish,959
 of lymphogranuloma inguinale,15224
 in tissue culture,17286
 microbe-like, in ticks,11623
 of mulberry dwarf,14064
 in narcissus stripe disease,1435
 negri, of rabies,4588
 in nematodes,15993
 Paschen, ultrafiltration,2624, 2627
 in plant virus diseases, relation to virus
 proteins,6644
 in scarlatina,11613
 of submaxillary-gland virus of guinea
 pig,13579
 of tobacco and tomato mosaics,12136
 in virus disease of cats,6169
 Incompatibility. (See *Sterility*.)
 Incubation. (See *Development*; *Eggs*.)
 Incubators, humidity in, measurement,
 785
 Indican reaction, in kidney insufficiency,
 17835
 Indicators, acid dye, absorption by
 muscles,2260
 for flocculation test in malaria,6753
 melanin as,12709
 oxidation-reduction, anaerobic photo-
 chemical reduction,16331
 redox dye, reduction by x-rays,8579
 Indicator plants. (See also *Calcicoles*;
 Silicicoles.)
 concept and status,16264
 relations between soils and,10784
 of *Se*, *Astragalus* spp. as,17734
 in western U. S. A.,10179, 10776
 in streams of Lüneburg Heath, temp. re-
 quirements,14394
 use in Rhodesia,9034
 for vintage types of grapes,15585
 of water movements, plankton as, 16273
Indigofera tinctoria, active principle, isola-
 tion and chemistry,12026
 Individual(s), cellular and multicellular,
 social organization and,8996
 Indole. (See also *Hormones* (*plant*).)
 acetic acid, toxicity,14786
 derivatives, effect on Thormaelen's re-
 action and indican reactions of
 urine, rabbit,13141
 dosage,13178
 pharm.,13178
 propionic acid, toxicity,14786
 Indoloanthrone, carcinogenic activity,
 mice,13207
 Indophenol, -reducing capacity of leuco-
 cytes,3640
 sodium benzenone, inhibition of tyrosi-
 nase melanin formation by, 1891
 Indoxyl formation in vivo from o-nitro-
 acetophenone,7416
 Indoxylacetyl, compounds as source of
 blue fluorescence in u.v. light,
 3948
 Induction. (See under *Morphogenesis*.)
 Industrial diseases. (See also *Health*;
 Hygiene.)
 anemia in workers on tea estates, 11320
 anthracosis,14985
 asbestosis, diagnosis and prevention,
 11371
 avoidance,8306
 benzol poisoning,13279
 urinary sulfate test,7922
 chronic F poisoning, in cryolite workers,
 5871
 compressed air illness, O₂ therapy,
 11372
 dermatitis, patch test and,17144
 Dupuytren's contraction, in uphol-
 sterers,7926
 ethylene dichloride poisoning,7923
 gastrocnemius of miners,13278
 keratitis and corneal dystrophy, 14987
 laws for prevention and control, 14994
 lung cancer, in generator gas workers,
 4205
 radium miners,7843
 non-intoxication with pentachlorophenol,
 11361
 pneumoconiosis,2352
 silicosis,615
 2420, 2422, 2423, 5870
 5875, 7848, 7924, 9667
 11364, 11369, 13276, 14984
 syphilis control measures in,15302
 tuberculosis in anthracite miners, 14985
 control,13283
 incidence,11369
 mortality,11682
 Well's disease as,8302
 Industrial dusts, relation to lung cancer,
 13216
 Industrial gases. (See *Fumes*; *Gases*;
 Smoke.)
 Industrial hygiene. (See also *Health*; *Hy-*
 giene; *Sanitation*; *Work*.)
 acetone vapors, effects in guinea pigs,
 14993
 anatomy of movements of workers,
 14991
 of anthracite miners, lobar pneumonia
 and,7921
 basophilic aggregation test in cement
 workers,5873
 basophilic erythrocytes in silicosis vs.
 plumbism,5875
 biophotometer, use, vit. A therapy and,
 5876
 blood picture in workers exposed to x-
 rays,3577
 blood pressure in coal miners, Java,
 14758
 chlorinated hydrocarbons, safe conc.,
 11358
 chlorinated naphthalenes, effects,5872
 codes,14983
 control of hygienic exposures,11357
 development, in U. S.,7920
 dust counts, significance,14986
 gas poisoning in welding,5878
 HF burns, therapy,11360
 heavy physical work, longevity and,
 433
 lead hazards,5874
 medical department organization, 14992
 microorganisms in,15399
 mycology, book,10059
 nitrobenzene in blood, detm.,7314
 prevention of silicosis by aluminum,
 5870
 program, state health department, 11365
 sensitization to phthalic anhydride in
 paint industry,13442
 time lost through sickness and accidents,
 14988
 toxicity of N-isobutyl amides, in fly
 sprays,5869
 tuberculous lesions vs. dust hazards,
 13276
 of viscose rayon mfg., hazards,7919
 Industrial wastes. (See also *Pollution*;
 Sewage.)
 control in natural waters,15333
 toxicity of wine to plants and soil,
 13904
Inermicapsifer (p.1870*) *leporis*, from hare,
 15987
 Infant(s). (See also *Births*; *Children*;
 Parent-offspring relationship; *New-*
 born.)
 absorption of methylene blue by eryth-
 rocytes, mechanism,14869
 alimentary K-avitaminosis,16917
 allergy in,17187
 significance of first signs,4175
 anemia, alimentary, vit. A deficiency
 and,4250
 hemolytic, with normal red blood cell
 fragility,2349
 nutritional, etiology,7818
 new carbohydrate in therapy, 13194
 atropine poisoning in,16798
 Bac. acidophilus in feces of breast fed
 dyspeptic,17304
 Bact. alkalescens in stools of normal,
 17316
 behavior, spiral organization in pattern-
 ing,7616
 blood coagulation, prothrombin and,
 11269, 11270
 blood Fe and Cu in,426
 blood P, Egypt,2348
 blood plasma proteins,561
 blood vol. and extra-cellular fluid, 12643
 body proportions, growth data,725
 brain, metabolism,7409
 bronchopneumonia in Egypt, bacterial
 associations,8220
 calcification of arteries in,495
 cardiac hypertrophy, etiology,11184
 central nervous system, lipomatosis,
 case,569
 congenital malaria in,6745
 congenital rhabdomyoma of heart, 7840
 death at birth, causes,11112
 diet in relation to intestinal microflora,
 4700
 diseases, vit. C as affecting,11267
 diurnal temp. and motility pattern de-
 velopment in,12643
 with eczema, body build,17004
 serum lipids,11264
 enamel organ in, vascular penetration,
 5906
 feeding, nursing conditions, Bavaria,
 5797
 growth, in Batavia,4177
 in first year,559
 in stature and wt., analysis,564
 histoplasmosis in, clin-path.,14867
 hyperthymic, sensitivity to insulin,
 16630
 intestinal parasite, myriapod as, 6729
 Fe balance in, vit. B₁ as affecting,
 2037
 malaria in, season as affecting, Bengal,
 15972
 metabolism. (See *Metabolism*.)
 milk for, sanitary control methods,
 6286
 mortality. (See *Death*, *rate*.)
 new-born, adiponecrosis subcutanea
 neonatorum, case,557
 basophilic aggregations in,10916
 birth wt. variations, causes,13190
 bleeding, abnormal, vit. K as affect-
 ing,7390
 blood group detm.,13522, 13524
 blood prothrombin in,10923
 vit. K as affecting,12769, 14681
 complementary feedings, effects, 563
 dental hypoplasia,2446
 icteric index,11273
 infectious diarrhea, etiology,7816
 infectious diseases in, etiology, 2163
 leucemia, hist-path.,7881
 peritoneal vaginal processes, closure
 at time of birth,17041
 pharynx, anatomy,8005
 spinal cord, quantitative study,682
 tetany,2344
 urinary tract infections,16650
 weight, seriatic growth in,5796
 pneumonia, intramuscular serum
 therapy, value,4176

SUBJECT INDEX

Infarction-Insecta

- premature, case report, 2347
thyroid extract as affecting, 2346
water exchange in, 7414
respiratory tract diseases and naso-
pharyngeal flora in, 15318
rickets, incidence and etiology, 7817
scleroderma, case, 605
scurvy, liver, C in tissues, 16921
vit. C in liver and, 11359
syphilis acquired in, 15344
Infarction, heart, electrocardiogram
localization, man, 9533, 11170, 14764
splenic, in avian malaria, 17899
Infection(s). (See also *Diseases; Epidem-
ics; Immunity; Immunization; Im-
munology; Parasitism*; and espe-
cially under specific pathogenic or-
ganisms and diseases.)
acute hematology, 16889
by anaerobic bacteria, book, 10086
in animals, ticks as vectors, 10025
aural and sinus, chilling of body sur-
faces as affecting, 555
bacterial, chemotherapy, 4492
mechanism, 4492
urticaria induced by, 6055
blood lipids during, feeding pancreas as
affecting, 7386
bone, visceral hemorrhages in, cause,
. 13416
book, 4655
causes and prevention, textbook, 15325
of central nervous system, review, 7866
chemotherapy, book, 9917
chronic, comparisons of intradermal,
agglutination and in vitro tests
in, 11653, 11671
effect on sedimentation rate, children,
. 16822
exam. of cultures from, 17326
Hb metabolism, 14935
complex, diagnosis, 16905
from dental wounds, 13597
dyes as affecting, 14918
effect on childhood behavior, 11272
on growth of tumors, mice, 583
endocrine ablations as affecting, 931
environmental relations, 10008
epidemic, virus-pneumonia in infants
after, 11614
focal, pyelonephritis in, 11577
rôle in rheumatoid arthritis, 4610
virulence of cocci from, 13607
gall bladder, chemotherapy, review,
. 13541
gas-bacillus, therapy, 15347
gastro-intestinal, alkaline lysed vaccines
for, 2561
genital-tract, sulfanilamide therapy of
upper ♀, 13539
host-parasite relations in, collodion sac
for study, 17299
migration of hosts, epidemiological re-
lations, 11711
mixed, Abderhalden reaction in, 9826
and neutropenia, effect on wound heal-
ing, 16900
parasitic, book, 3238
Cuba, 6720
plumbing in relation to, 11693
pneumococcal, mononuclear response,
guinea pigs, 13236
localization in rabbits, 626
protozoan, ultra short waves as af-
fecting, 1557
pyrogenic, in goats and sheep, 15358
relation to hypoparathyroidism, 14957
resistance, alcoholic intoxication and
ether anesthesia as affecting, 625
non-specific factors in, 6070, 6071
rôle of inborn factors in, 13859
respiratory, streptococcal vaccines for,
. 4503
rôle in nutritional anemia, infants, 7818
streptococcal, chemotherapy, 13551
suppuration, hepatic insufficiency and
protein equilibrium during, 16554
surgical, chemotherapy by sulphonamide
compounds, 4553, 4554
tapeworm, premunition and, 10485
urinary, Ca mandelate therapy, 4558
chemotherapy, 11577, 13534
phenothiazine in, 7756
sulfanilamide therapy, 4558
vaginal, etiology, 17311
venous thrombosis and, 16880
vit. C requirement, leucocytosis and,
. 7876
"warming time" in relation to, 6072
x-ray treatment, 16323
Infectious abortion. (See *Brucella abortus*.)
Inflammation, azulene as affecting, 16781
capillary permeability, histamine and,
. 5815, 5816
leucotaxine and, 5317
cells, in placenta, significance, 2163
heat as affecting, rabbits, 14919
leucocytosis and, hist. rabbits, 9607
leucocytes, migration in, leucotaxine
as affecting, 624
viability, pH and, 5318
review, 9806
rôle in immunity, 2383
leucotaxine and histamine in, 4234
of lymphocytes in, 14916
skin, effect on necrotizing action of,
staphylococcus toxin, 13239
Inflorescence. (See also *Flower*.)
grass, development and symmetry, 15526
morph. and ecology in *Calluna*, 2909
Influenza. (See also *Hemophilus influenzae*.)
in Brazil, 17388
complement-fixing antibodies in sera
of virus-vaccinated cases, 2558
epidemic, immunization to, quantitative
relation of virus dose to im-
munity, 4451
meteorological and geographical fac-
tors in, 15310
nasal histological and serologic
changes in ferrets, 620, 621
resistance of regenerating epithelium
to reinfection, 627
etiology, 2625, 4592, 9826
Hemophilus influenzae-induced, vaccine
for, 6026
mortality in relation to climatic and
socio-economic factors, 6209
passive immunization to exp., 13430
Pasteurella of cat resembling bacillus,
. 2646
periodic recurrence in relation to terres-
trial and extra terrestrial cycles, 14387
porcine viruses, serological comparison,
. 11628
relation to lung cancer, 18216
serodiagnosis, by Abderhalden reaction
in carriers and cases, 9826
by complement fixation, 2558
serologic and immunologic study of
human and swine forms, 2578
streptococcal vaccines for, 4503
swine, antibody response to, 8167
a complex infection, 16905
etiology and comparisons, 4592
serologic and immunologic study of
human and swine forms, 2578
viruses serologically compared, 11628
virus, l-ascorbic acid in exp. infection,
. 13559
compared to that of mouse pneu-
monia, 9948
human and porcine strains compared
by animal and tissue culture
passage, 4592
human strains, review, 9955
neutropic strain, 8212, 11621
neutralization by antisera, quantita-
tive relations, 13431
neutralizing antibodies to, 13430
specificity of active immunity to exp.
infection, 8103
susceptible animals, 8308
tissue culture, 11612
transmission to Chinese mink and
David's squirrel, 8308
Infra-red, effect on blood cholesterol and
adipose tissue, 5468
photography, book, 10678
use in protecting lemon orchards against
frost, 8517
Infundibulum. (See under *Brain*.)
Infusion fluids, pyrogen, comparison to
that in typhoid vaccine, 13504
Infusoria (Prot.), 9.1868³. (See *Ciliata*;
Paramoecium.)
Infusorial earth, injection into kidney,
effect on blood pressure, 5713
Inga (p.1865⁴), n. sp., 6437
Ingestion. (See *Food, ingestion; Food*
habits.)
Inheritance. (See *Heredity; Genetics*.)
of acquired characters. (See *Acquired*
characters.)
maternal. (See *Matroclony*.)
Inhibition, in nervous system. (See *Re-
flexes*; and under *Nervous system*.)
Inhibitors. (See *Antienzymes*; and under
Enzymes.)
Iniomi (Pisces), p.1879⁵
- Initial(s). (See also *Meristem; Root*;
Stem.)
Injection, of plant organs, methods and
use in physiology, 6622
Injury. (See also *Burns; Trauma; Wounds*;
Wounding.)
in industry, anatomical basis, 14991
effect on time lost, 14988
Innervation. (See *Nerve; Nervous system*;
and under various organs, regions,
and tissues.)
Inocarpus, validity, 8870
Inosinic acid, from muscle, hydrolysis,
. 12681
Inositol, effect on growth, fungi, 12065
Inositol phosphate. (See *Phytin*.)
Insanity. (See *Psychoses*.)
Insecta, p.1874. (See also *Entomology*;
Insecticides; etc.; and under
orders, e.g., *Coleoptera, Diptera*.)
activity, effect on pulsation rate, 17352
antennal musculature, 10577
antigens, from blowfly larvae, 12216
aquatic, of fresh waters, ecology, 137
beneficial, forest, resemblance to pests,
. 10430
bibliog. and list, Wash., 12170
blood, analysis, *Prodenia*, 244
pulsation rate, *Eusoa* larva, 17852
brood and generation defined, 1486
caught by traps attached to airplanes,
. 10767
corn earworm, Va., 17868
corpus allatum, ablation, nerve section
and implantation as affecting,
Dixippus, 1280
in relation to diapause, *Lucilia*, 5030
in dead pine and oak stumps, ecological
relations, 10773
development, arthropodan, physiology,
review, 3812
of bruchid eggs, KCN as affecting,
. 765
of chrysomelid beetles, 771
sex ratio, host as affecting, parasitic
hymenoptera, 8668
of stone fly, 9793
of *Tachycines*, 768
diapause, fall cankerworm, 10425
digestive tract, anatomy in *Locusta*,
. 9786
diseases. (See especially under hosts,
e.g., *Honeybee, Silkworm*, etc.;
and under disease-producing
organisms, e.g., *Entomophthora*,
Isaria, Bacillus, etc.)
effect on insect population, 1487
dispersal by airplanes, over Caribbean
region, 9007
distribution, breeding areas for tomato
psyllid, 10415
drier and protector for, 12338
on edible fungi, bibl., 8646
egg types, 17975
enemies of *Protoparce seata*, 5035
of England, popular ecology, 10683
eyes, electrical response, temp. as af-
fecting, 12643
fauna of emergent plants, U. S., 8999
feeders on aquatic plants, Michigan,
ecology, 107
flight, method for study, 10576
food, of screwworm adult, 12212
galls. (See *Galls*.)
generations, develop. of 2nd in corn
borer, 10418, 12189
grass-inhabiting, emergence cages for,
. 17978
growth curves, analysis, 9214
habitats of *Anopheles*, 3655
hairs, as irritant, 3650
hatching, mechanism, *Bombyx*, 8677
as interm. hosts of poultry nematode,
. 10478
iridescence in, lighting and viewing,
. 10679
jumping power, *Baues latrodicti* ♀, 5069
larvae, cannibalism among, 10766
ingested, fate, 1515
morph., in Neuropteroids, 3363
life history studies, math. methods,
. 3476
longevity during inanition, 10771
mandibles, structure and function,
. 17977
medical and industrial, pyrethrum oil
spray film on, exptl., 3192
metamorphosis. (See also *Meta-
morphosis*.)
rôle of hormones in, 9781, 9782
migration, of *Anopheles gambiae* in
Brazil, 8663
of beet leafhopper, Idaho, 12186
of grasshoppers, expts., 14122
of *Lepinotarsa*, in Europe, 12188

Insecta (continued)

- migration (continued)
 of *Melolontha* spp., larvae, . . . 14135
 of rice stink bug, . . . 12185
 mosquito trapping, Fla., temp. as affecting, . . . 12213
 mounting of mosquito eggs, technique, . . . 12215
 nervous system, drugs as affecting, 9562
 effect on external regenerated form of antennae and legs, . . . 435
 nuptial swarms, factors affecting, . . . 10438
Anopheles, . . . 10473
 olfactory responses of house fly, . . . 10768
 outbreaks, in forests, damage, . . . 10768
 in relation to population fluctuations, . . . 8995
 oviposition, in *Habrobracon*, effect on fertility, . . . 3353
 pH of myiatic wounds as affecting *Cochliomyia*, . . . 8659
 of parasitological importance, chaps., . . . 14164
 pests. (See also *Dusting*; *Insecticides*; *Repellants*; *Spraying*; *Sprays*; etc.)
 of animals, chemical control, . . . 15917
 antler moth, Scotland, . . . 12182
Aphelinus on *Eriosoma*, . . . 17855
 of aphids, Ontario, . . . 10451
 basic Cu arsenate as affecting, 10472
 of bats, Berlin, . . . 10443
 biological control. (See especially under specific pests and parasites.)
 of army worms in Hawaii, . . . 3208
 of avocado mealybug in Hawaii, . . . 3208
 of corn borer, . . . 12229
 of corn ear worm, . . . 3205
 of *Diatraea*, . . . 15925
 of elm leaf beetle, . . . 3204
 with fungus parasite, *Piesma* and *Galleria*, . . . 8665
 of greenhouse white fly, . . . 3207
 of gypsy moth, . . . 8654
 of hymenopterous parasite, . . . 8668
 of *Malacosoma*, . . . 15927
 with microorganisms, . . . 8666
 with parasites, *Diprion*, Ont., 10432
 of *Pieris* on cabbage, . . . 3206
 in Puerto Rico, . . . 8669
 of *Scirpophaga* by *Stenobracon*, . . . 8667
 survival of insect parasites in refrigeration, . . . 1520
 of wood wasps (*Sirex*), . . . 15926
 of blackflies, Canada, . . . 15930
 of blueberries, Mass., . . . 17622
 of cacao, New Guinea, . . . 14107
 in Canada, 1937, . . . 10387
 of canning peas, Wis., . . . 15535
 of cauliflower, Ceylon, . . . 13876
 chapter, lab manual, . . . 10498
 of *Citrus*, Argentina, . . . 6521
 history, parasites, and control of orange tortrix, 8634, 15894
 southeastern U. S. A., . . . 5021
 in Connecticut, . . . 8641
 on conifers, sawflies, . . . 8652
 control, entoray machine for, . . . 10444
 of granary beetle, . . . 5047
 mosquito problems, . . . 10434
 by radio waves, . . . 1526
 of tsetse fly, Kenya, . . . 5064
 by vapor-heat treatment, narcissus, . . . 12196
 in warehouse and storage, . . . 3192
 of cotton, analysis of plat designs, . . . 5028
 Ariz., . . . 10407
 climate as affecting, Brazil, 12192
 new root aphid, . . . 17874
 1936-37, Sao Paulo, . . . 12193
 of cotton flea hopper, . . . 12280
 of crimson clover, U. S. A., . . . 2939
 damage, relation to physical condition of foliage, beans and tomato, . . . 1495
 of *Derris*, . . . 12238
 of Douglas fir, Idaho, . . . 10427
 encyrtid on black scale, . . . 10448
 of forests. (See *Forests, insect pests*.)
 household, control by cleanliness and repairs, . . . 10421
 in Jap. Beetle control, . . . 12208
 of kapok, East Africa, . . . 4828
 of lac and its host plants, . . . 14102
 light traps in study, . . . 10389
 living vs. dead scales on citrus, detn., . . . 14110
Lygus pratensis, of apple, N. Y., . . . 12177
 of maize, crop rotation as affecting, . . . 17865

Insecta (continued)

- pests (continued)
 of meadows and pastures, book, 15904
Melolontha in Finland, . . . 12201
 of milled rice, control, . . . 5048
 multiple parasitism for peach moth, . . . 10456
 of mushrooms, Holland, . . . 2981
 of oak, Rumania, . . . 15910
 of orange, Tucuman, . . . 17859
 of orange tortrix, S. Calif., . . . 8634
 of ornamentals, handbook, . . . 14098
 phytophagous larvae, control by flooding, . . . 15900
 of pink bollworm, Sao Paulo, . . . 12231
 of potato, effect on tuber yield, N. Y., . . . 17873
Prophanurus from *Diatraea* eggs, Porto Rico, . . . 10459
 of *Prunus* spp., *Macropsis*, . . . 10390
 psocids as, . . . 14101
 of quail, . . . 3541
 of raspberries, . . . 8638, 15591
 of rice, U. S. A., . . . 13816
 of *Santalum album*, . . . 14058
Schizonotus on *Plagioderia*, . . . 10447
 of *Sezava* spp., breeding, . . . 8635
 of shade trees, Mass., . . . 14124
 of small fruits, Kansas, . . . 10396
 of snap beans, S. C., . . . 17584
 of stored products, control by derris insecticides, . . . 6710
 of strawberry, Oregon, . . . 15895
 tachinid on nun moth, Saxony, 10452
 of trees, hurricane as affecting, New England, . . . 12205
 wheat-stem sawfly, Ohio, 1938, 8643
 of yellow-headed spruce sawfly, . . . 12209
 phylogeny, changes in position of appendages in, . . . 1694
 phytophagous, balance in tropical forests, . . . 8977
 pigments, in excreta, chem., . . . 12183
 pollinating alpine flowers, . . . 10685
 popular book, . . . 10684
 populations, estimation methods, . . . 8987
 in relation to biological control, 9004
 wireworms in relation to potato injury, . . . 10410
 as predators, of pink bollworm, Sao Paulo, . . . 12231
 six-spotted thrips, . . . 10446
Syrphus larvae on plant-lice, . . . 8649
 proprioception in, . . . 5685, 5686
 pupae, of Trichoptera, in adult identification, . . . 3361
 races, of *Anopheles*, . . . 12226
 physiological, *Culex*, . . . 8660
 rearing, host size as affecting sex ratio, . . . 8668
 parasitic hymenoptera, . . . 5062
 methods, for bedbugs, . . . 8661
 collecting and feeding mosquitoes, . . . 8666
 for *Glossina*, . . . 8666
 for honeybees, queens and colonies, . . . 8674
 for hymenopterous parasites, . . . 10449, 10451
 for toxicity studies on *Drosophila*, . . . 10469
 for wireworms, . . . 5041
 recolonization of sterilized soils by, . . . 12572
 regeneration in rôle of nervous system, . . . 435
 resistance, by selection in plant breeding, . . . 8930
 respiration through skin, . . . 3779
 on rodents, control by methyl bromide, . . . 6206
 senses, of bat flies, . . . 10443
 social, effects of selection in, . . . 3442
 population dynamics, factors affecting, . . . 8997
 soil, population sampling, . . . 9001
 somatic polyploidy, summary, . . . 14352
 stridulation in *Epiplatia* (Odonata), . . . 16045
 on sweet corn, . . . 3311
 of Tahiti, . . . 1675
 temp. effects, cotton root aphid, . . . 17874
 temp. and humidity relations of cockroach, . . . 13, 3484
 tympanal organ in Lepidopt., . . . 10617
 as vectors. (See also *Aphids*; *Carriers*; *Mosquitoes*; *Sandfly*; *Thrips*; *Ticks*; *Vectors*; and especially under specific diseases, e.g., *Malaria*, *Mosaic*, etc.; and under specific vectors, e.g., *Eutettix*, *Mosquito*, *Phlebotomus*.)
 of abaca mosaic, . . . 4978, 6645

Insecta (continued)

- as vectors (continued)
 of animal and plant viruses, . . . 8615
 apparatus for testing, . . . 4609
 of brucellosis (?), . . . 4609
 of cabbage black ring disease, 4980
 cage for, in virus inoculations, 15886
 of cassava mosaic virus, . . . 14443
 of cherry buckskin, collection method, . . . 3169
 of equine encephalomyelitis, by mosquitoes, . . . 2614, 3217
 index, . . . 14060
 of internal boil disease of cotton, Brazil, . . . 2198
 of Japanese epidemic encephalitis, by mosquitoes, . . . 952
 of leishmaniasis, by *Phlebotomus*, . . . 1006
 of lettuce yellows, control, . . . 12199
 of malaria, chemotherapy, . . . 9915
 of mild mosaic of *Vicia faba*, . . . 12140
 of narcissus mosaic, . . . 14057
 of nuttalliosis, . . . 8756
 of oriental sore, by flies, . . . 13689
 of pineapple pink disease, . . . 1482
 of pineapple yellow spot, . . . 6648
 of pinta, . . . 13633
 of plague, by fleas, . . . 1004, 8290
 of plant viruses, review, . . . 10357
 of potato yellow dwarf, . . . 10794
 of raspberry mosaic, susceptibility and resistance to, . . . 8637
 of relapsing fever, by lice, . . . 4581
 of *Rickettsia*-induced fever, by lice, . . . 15314
 of *Rubus* mosaic, . . . 13562, 13563
 of sugar beet yellows, . . . 14068, 15829
 of sugarcane mosaic, . . . 15832
 of sylvatic plague, by fleas, . . . 13689
 of tobacco leaf curl, . . . 17788
 of tularemia, by fleas, . . . 4681
 of typhus, by rat-fleas, . . . 10023
 of viruses, body fluids as affecting, . . . 3169
 of yellow fever, by mosquitoes, 6218, 6220, 12210A, 13558, 13581
 negative for neurotropic virus, . . . 8142
 virus disease, corn ear worm, . . . 10455
 of western N. America, . . . 16132
 wings, blood movements and fat body development in, *Ephestia*, . . . 4401
 evolution, . . . 3364
 halteres, morphology and physiology, . . . 12862
 inheritance of color pattern, *Ephestia*, . . . 96
 pattern, in Lepidoptera, . . . 10615
 rate of movement, analysis, *Drosophila*, . . . 8762
 sheaths, formula for heterogenic growth in, . . . 3364
 venation in Odonata, . . . 12404
 Insecticide(s). (See also *Baits*; *Dips*; *Dusting*; *Fumigants*; *Fumigation*; *Fungicides*; *Repellents*; *Sprays*; *Spraying*.)
 for *Aceratogalka*, . . . 17880
 aerial spray, factors in, . . . 17889
 ammonium sulphate as, for mosquito larvae, . . . 12211
 for aphids on truck crops, . . . 17879
 arsenical, effect on soils, . . . 12108
 factors affecting efficacy, . . . 6712
 soil injury by, . . . 5081
 Ba fluosilicate as, . . . 1529
 basic Cu arsenate as, . . . 10472, 10474
 for beet leafhopper, field expts., 12186
 beet webworm, . . . 15905
 Bordeaux, with S and pyrethrum, potato, . . . 12197
 Ca arsenate of low sol., prep., . . . 14146
 calomel, for cabbage root fly, . . . 5046
 for *Delta*, . . . 5046
 for caterpillars on tomatoes, . . . 3189
 chlorpicrin as, . . . 10461
 chrysanthemum monocarboxylic acid esters as, . . . 6711
 for citrus whitefly, . . . 14145
 for codling moth, . . . 10397
 . . . 10398, 10399, 17866
 contact, aliphatic thiocyanates as, 5070
 laboratory testing method, 6709, 6710
 with *Drosophila*, . . . 10469
 for nun moth and pine looper, . . . 5049
 pyrethrum and rotenone as, . . . 17885
 for cotton boll weevil, comparison, 6713
 and flea hopper, . . . 5026
 Sea Island cotton, . . . 5031
 for cotton bollworm, . . . 10413

Insecticide (continued)

- for cowpea curculio (*Chalcodermus*), 3180
 cryolite as, 14121
 cryolite and spreader, for *Anticarsia*, 5024
 for *Dendroctonus* in pine, 14125
 dermatitis due to, 15935
 derris as, for pests of stored products, 6710
 for *Diabrotica vittata*, 17871
 B, B'-dichloroethyl ether as, in Japanese beetle control, 17887
 difficulty of applying on cotton, 5034
 dinitro-o-cyclohexylphenol for mites, 5016, 14106
 effect on apple trees and parasites, 10391
 on chemoreceptors (*Musca*), 5072
 for eggs of orchard pests, 10470
 of screw worm, essential oils as, 14139
 electrical charge and potential, effect in spraying, 10471
 equipment, for vaporized nicotine, 10404
 ethylene oxide as, 10461
 for European corn borer, 17863
 from farm products, 13842
 for field cricket, Louisiana, 5027
 for flatheaded apple tree borer, 10391
 with fungicide, for apple, Del., 12179
 copper-nicotine-bentonite as, 14149
 for gall flies on chrysanthemums, 12193
 for harlequin bug, 12204
 HCN as, 10461
 heat as, 10416, 10420
 pH control, importance in sprays, 10460
 inactivation by insects, causes, 6714
 inert materials as, 12232
 injection into sap stream of trees, 14125, 14126
 for Japanese beetle, larvae, 1485
 for maybeetle larvae, 14135
 need for international catalog, 17844
 nicotine-bentonite as, 10395
 nicotine and rotenone as, for pea aphid, 17886
 oil, injury to citrus, 10475
 methods of use, 10403
 microtechnical test, 1530
 petroleum, ovidical action, mechanism, 12224
 review, 15932
 for onion fly, 17882
 orthodichlorobenzene as, 10463
 particle-size, detn., 12233
 effect on toxicity for codling moth, 12239
 for pea moth, 10405
 for peach borer, 6695
 phenothiazine as, 1518, 1528
 for plague vector control, 1004
 from plants, of Assam, 12233
 polychloropentane as, 10463
 pyrethrum, for apple insects, 10400
 insect resistance to, 5073
 repellent, tetramethylthiuram disulfide as, 12234, 12236
 for termites in soil, 10463
 residues, HCN in citrus, 14103
 lack, with nicotine-bentonite, 10395
 for rodent pests, methyl bromide as, 6206
 rotenone in dusts, value, 5080
 sodium arsenite as, 17888
 sodium selenate, 12200
 soil fumigant as, 17887
 soil sterilization, for *Naupactus* control, 5025
 sprays, effect on leaf area, 17862
 spreaders, quebracho as affecting nicotine, 17883
 stomach poisons, for grasshoppers, 12237
 for strawberry leaf roller, 10396
 for sugar-cane frog-hopper, 14147
 S dust for mites on cotton, S. Paulo, 12191
 tartar emetic as, 10388
Tephrosia as, 1527, 10464
 toxicity of arsenicals to cotton worms, 5075
 of benzene derivatives, codling moth, 10401
 trichlorobenzene as, 10463
 vapor-heat as, 12196
 for vegetable weevil, 5070
 weather, effect on cubé, 5079
 wetting agents, esters of Na sulfosuccinic acid as, 12231A
 for wireworm in soil, 5033
 Insectivora (Mammalia), p.1882¹
 urino-genital system in, phylogeny, 7051

Instinct. (See also Behavior.)

- animosity and tolerance, queen polistes wasp, 9448
 maternal, vit. B₁ and Mn as affecting, 12847
 Instruments. (See also under names and uses of instruments.)
 Insulin. (See also Blood, sugar; Carbohydrate, metabolism; Diabetes; Glucose, metabolism; Glycolysis; Pancreas; Urine, sugar; etc.)
 absorption, from digestive tract, 12643
 with surgical removal, 13178
 action, of alum precipitated, man, 9277
 exercise and, 14850
 as influenced by:
 adrenalectomy, 2305
 arginine, 5792
 globin, 5780
 metabolic rate, 14536
 pituitary glycotropic factor, rabbit, 3876
 zinc, 3648
 in suckling mice, 2336
 -adrenalin theory of hunger and satiety, 12901
 alcohol metabolism and, 12643
 antagonism, glucose tolerance and, 7898
 anti-insulin action of pituitary glycotropin, 3933
 bioassay, dosage-response relation in cross-over test, rabbit, 14809
 statistical treatment, rabbit, 14789
 chem. and activity, review, 9278
 chem. and secretion, 5551
 convulsions, effect of partial pressures of O, N and CO₂, 4136
 mechanism, 2336
 crystalline vs. amorphous, 13178
 derivatives, chemical properties, 17139
 in diabetes therapy, 2660, 2664
 disappearance from body, rate, 12643
 disulfide linkage, hydrolysis, 12673
 dosage-response curves, rabbit, 14789
 effect on:
 alcohol in blood, 12643
 in acute alcoholism, 16776
 alcohol oxidation, rat, 14477
 blood bromine, dog, 12986
 blood phosphates, diabetes, 5852
 blood phosphate exchange with muscle, 10913
 blood sugar, amino-groups and, 17139
 Cu as affecting, 11255
 in diabetes, 533
 in fever, 14863
 R.Q. and, in diabetes, 7896
 sympathetomized dog, 7411
 vit. B₁ as affecting, 5559
 body temp., factors affecting, 11241
 carbohydrate metabolism, 16486
 creatinurea after hunger or phlorrhizin, rabbits, 7428
 fishes, 2288
 glycogen reserves, 2287
 hepatic glucose output after ablation of adrenals and pituitary, 7338
 pH of cerebral cortex and blood, 7664
 hypophysectomized rats, ant. pituitary extract and, 3689
 incidence of diabetic retinitis, 5856
 lactic acid in brain, 5788
 liver, 7518, 12963
 liver glycogen during perfusion, 14573
 liver glycogenolysis, 5600
 muscle glycogen, 12643
 muscle metabolism, 12643
 partially hypophysectomized rats, 4125
 phosphoric ester formation in muscle, 14743
 plasma and erythrocyte glycogen, 7343
 protein metabolism, 9190
 nephrectomized dogs, 3679
 retina after adrenalectomy, 12989
 streptococci (group-C) infections, 9936
 sugar excretion after pancreatectomy, 16813
 globin, effect on diabetes, 5851
 hyperinsulinism, due to pancreatic adenoma, 16871
 hypersensitivity to forms, 6034
 loss in hypophysectomized dogs, 12643
 in malaria, 3684
 in pellagrins, 14945
 large doses, effects, 16757

Insulin (continued)

- local lipid atrophy and dystrophy due to, 14955
 oral administration, 399
 in pancreas, diet and, 12643
 polarographic study, 9378, 15178
 preparations, requirement in diabetic children, 12266
 protamine, carbohydrate tolerance after, in diabetes, 2665, 2660
 in diabetes therapy, 2664, 4290
 protamine zinc, crystalline vs. amorphous, effects, 12643
 diet and, 2029, 2030
 effect on blood sugar, man, 13180
 on depancreatized dog, 14962
 on hypertensive diabetics, 14976
 toxicity and tolerance to, mammals, 13186
 zinc and, therapeutics, 2291
 pyrogen in reactive vs. that in typhoid vaccine, 13504
 repeated injections as affecting onset of convulsions, 5615
 resistance, in diagnosis of thyroid disease, 9644
 protamine-zinc insulin and, 14958
 sensitivity, body temp. and, 231
 central nervous system and, 12643
 glutathione in tissues and, 9834
 hyperthyroid infant, 16630
 pituitary and, 379
 thyroidectomy as affecting, 16813
 shock, anoxia shock and, anat. changes, 4299
 cerebral metabolism and potentials, 7910, 7911
 effect on cardiovascular system, 9526
 heart muscle, 11227
 glycosuria during and after, 14960
 in psychoses, 4270
 in schizophrenias, effect on:
 cerebrospinal fluid, 7917
 pulse and blood pressure, 16726
 surface tension of serum, 7916
 stability, metals affecting, 7799
 tolerance, test, in diagnosis of hyperinsulinism, 16929
 vit. B complex and, 3725, 12643
 treatment, symptom progression during, 12643
 zinc, action, vs. standard insulin vs. protamine Zn insulin, 14828
 therapeutic advantages, 11223
 zinc and, in pancreas in diabetes, 359
 Integument. (See Seed coat; Skin.)
 Intelligence. (See also Ability; Behavior; Feeble-mindedness; Idiocy.)
 as influenced by:
 cephalotropic amines, 14866
 cobra venom and opiates, 12643
 helminth infestation, children, 6754
 in man, 1786
 pituitary dwarfism and, 436
 reasoning tests in rats, 3991, 3992
 Interfacial phenomena. (See Adsorption; Colloids; Films; Surface tension.)
 Interference. (See Crossing-over; Linkage.)
 Interferometer, Zeiss, use in metabolism studies, 12799
 Intersex(es). (See Gynandromorphism; Hermaphroditism; Sex, intergrades.)
 Interstitial tissue (cells). (See under organ concerned, e.g., Gonads, Ovary, Testis; Tissues.)
 Interval timers. (See Time recorders.)
 Intestine. (See also Digestion; Digestive tract.)
 absorption of Ca salts, 12912
 blood Ca/P ratio and, 11024
 of chloride, yeast extract as affecting, 12643
 of dextrose, adrenalectomy and NaCl as affecting, rat, 7499
 endocrine factors in, 12643
 of fat, fish, 16559
 as influenced by:
 adrenalectomy, 9247
 and iodoacetic acid poisoning, 12643
 giardiasis, children, 17920
 phloridzin, 9253
 of histamine, intestinal ischemia as affecting, 12643
 of insulin, 13178
 of iron, 12388
 MgSO₄ as affecting, 16564
 MgSO₄, anoxemia, as affecting, 12907
 mechanism, 3761
 of monosaccharide, rat, 12880
 ovabaine, rat, 5593
 of oxalic acid, 12826
 of phosphates, 16566
 of polonium, doses, 5427

Intestine (continued)

- absorption (continued)
 of proteins,12888
 of protein and glucose, from Vella loop,5598
 of protein split products from isolated loops, of colon,7521
 of sodium chloride, adrenalectomy as affecting, rat,7506
 of sugars, factors affecting, frog,16565
 of sugars and non-electrolytes,9265
 technic for study,9172
 of vit. A, in diseases,16556
 of water from colon, motility and,16555
 acetylcholine in, vagotomy and denervation as affecting,14657
 adenoma, studies, pig,11277
 appendix, muscle changes in disease,9603
 bacteria, (See also *Bacteria*; and especially under specific bacteria, e.g., *Escherichia coli*.)
 alteration in avitaminosis-K,16917
 anaerobic, temp. relations,17462
 change to aciduric type by trillactic acid,2653
 decomposition of organic acids by,2307
 effect on ascorbic acid oxidation,13699
 as influenced by:
 banana feeding,3768
 diet,2112
 fasting and thirst therapy, 8148
 raw apple diet, monkey,7399
 isolation method,11634
 lecithin-soap therapy,4563
 lipids,6325
 media for,10076
 new Bacteriaceae, rhesus monkey, 8362
 pathogens, diagnosis of Hohn-Herrmann method,17341
Salmonella braenderup from,10083
 bacterial infections, urticaria induced by,6055
 bacteriological problems,2640
 blastocystic foci in man and animals,973
 Brunner's glands, hist. changes, pernicious anemia and,2397
 cecum, ablation, effect on growth and infectability, chicks,17909
 acidity, *Strongylus vulgaris* and, horse,10512
 amino acids and choline in, dog and rabbit,12918
 equine, microflora, fauna and cytology in,4671
 keratinized cysts on, mice,14878
 cells, enterocorinamide, in fish,9715
 Golgi apparatus, *Lumbriconereis*, 1738
 chronic ulcerative ecchitis in rat,6238
 colon, explants, induced muscular spasm as affecting,7516
 prep., care and secretions, dog,7515
 motility, vagal stim., as affecting,5596
 parasitic infections, heat therapy as affecting,3240
 secretion, enzymes and, nerve stim. and drugs as affecting, cat,863
 sigmoid, adhesions in ♀♀,9259
 spasm, etiological importance in ulcerative colitis,7517
 stenosis,8353
 distention, effect on digestive secretion, duodeno-jejunal loop,354
 on venous circulation,13100
 intestinal inhibition during, pathways concerned, dog,865
 disturbance, rôle in arthritis,16902
 duodenum, acid instillation into, effect on blood sugar,11032, 12643
 distention, vasomotor reflexes and,9514
 enterogastrone, refractoriness to,7510
 goblet cells, effect on nematode parasites, lemons,6127
 leiomyosarcoma,16850
 papilla, variations and lesions, 3743
 rotation in embryo,8039
 stasis, syndrome,12908
 enteric coatings for capsules,349
 epithelium, histophysiology in, herons,4359
 fate of chlorophyll and carotinoids in,12911
 fibroma,2367
 fluid, osmotic relationship between blood plasma and,11036

Intestine (continued)

- pH, diet as affecting,2112
 as influenced by:
 anthelmintic alkaloids of areca nut,16810
 cholamine phosphoric acid esters,7761
 gastric juice, pig,14574
 glycine,5773
 perritin,7767
 procaine, cat,14831
 quinine,14855
 substance liberated by adrenergic nerves in rabbit's ear, fowl,12884
 intussusception, in cattle,8326
 ischemia, effect on blood pressure,11166
 on histamine absorption,12643
 jejunum, distension, afferent nerves excited by,12643
 juice, nucleotidase and nucleosidase in,12670
 lesions in congenital syphilis, hist.,9602
 lipodystrophy of Whipple,16567
 lower, multiple malignant tumors,16833
 of marine fish, *Anacamptothrix intestinalis* from,1057, 2766
 mid, size of columnar cells, temp. as affecting, Japanese beetle,8057
 motility, electrophysiological studies,12643
 as influenced by:
 adrenoxine,14310
 barbiturates,4105, 13178
 bile and bile salts, dog,9256
 derivatives of octin and trasentin,7812
 divinyl oxide anesthesia,346
 drugs,7795, 13150
 epinephrin substitutes,12126
 groups of adrenalin molecule,11041
 intestinal absorbents,13178
 saline cathartics,9551
 trypsin,5783
 prenatal, in anoxemia,3769
 mucus extract, phosphorylation of riboflavin by,2101
 nematode infestations, immunity, 15176
 nerve net, structure in mammals, 15013
 obstruction, bacterial flora of portal blood and,13614
 effect on blood vol.,9139
 fluid treatment in,16402
 high, effect of feeding duodenal contents,350
 jejunal, toxemia in,12643
 pyloric and jejunal, dog,357
 parasites, examination of stools for,9998
 phenol resorption,7519
 photography,14437
 pressures, intraluminal, of pyloric antrum and duodenal bulb,12643
 protozoa in. (See under *Protozoa*.)
 rectal disease, in lymphogranuloma venereum, blood protein and,16914
 rectum, development structure and functional significance, mammals,11378
 feces collection for bacteriological study,13646
 lymphogranulomatous stenosis, Frei-antigen plus auto-urine therapy,17212
 muscle, nervous control,14726
 reflex effect on gastric tonus and motility,2103
 resorption of fats and fatty acids, phloridzin as affecting,9253
 secretion, of jejunum and ileum, 12643
 of small, bile as affecting,12643
 velocity, pH, chlorides, enzyme and,12873
 small, amino acids in, effect on gastric peristalsis,12643
 aminoethyl phosphoric ester and adenylic acid in, rabbit and guinea pig,9251
 argentamin tumors, clin. threapy,5799
 chorion, mucous nerve ganglia in,16561
 musculature, circular,2095
 nerve cells and ganglia in, structure,15015
 occlusion, bile and bile pigments in urine after, dog,12876
 unusual neoplasms,14381
 wandering lymphocytes in, mammals,15040
 strangulation, effect on blood vol., 9139

- strictures, macrocytic anemia and, vs. pernicious anemia,7871
 systemic diseases in relation to,2041
 tuberculosis, after pulmonary disease,13244
 villi, activity, nervous control,3760
 volume in adrenal insufficiency, factors affecting,12643
 Intoxication. (See also *Poisoning*; *Toxemia*; *Toxicity*.)
 endocrine ablations as affecting,931
 Intracellular bodies. (See *Inclusion bodies*.)
 Intracranial pressure. (See *Cerebrospinal fluid, pressure*.)
 Intraocular fluid. (See under *Eye*.)
 Intraocular pressure. (See under *Eye*.)
 Intravital studies. (See *Stains*; *Staining*; *Tissue culture*.)
Intsia spp., use in forestry,4884
 Intumescence, in *Khaya ivorensis*, histology,10365
 resembling crown gall, induced by dye,10363
 Inulin, clearance, vit. A as affecting, dog,7566
 detn.,5483
 in blood and urine,1936, 5480
 in Indian foods,8516
 Invasins, saponin-like action,16772
 Invertebrates, carbonic anhydrase in,7265
 diurnal rhythms,9452
 effects of irradiation with short wave lengths, review,3485
 of fresh waters, ecology,137
 guanine metabolism in,12809
 hormones in, book,3849, 3857
 learning in,14690
 nervous system evolution in,13002
 of Pacific Coast, ecology,7072
 recolonization of sterilized soils by,12572
 Involuntary nervous system. (See *Nervous system, autonomic*.)
Inaengaea (p.1861) *asterosperma*, identified as *Emericella varicolor*,13731
Iodamoeba bütschlii,14192
 incidence, Indiana,14176
 Saskatchewan,17905
 willamst., incidence, Florida,14162
 iodate, silver, tests for purity,3593
 Iodides, in blood vs. spinal fluid,13178
 detn.,9117
 distr. in C.N.S. and spinal fluid,7391
 effect on blood cholesterol,1996
 on toxicity of nitro compounds,14824
 fever induced by,4465
 fractionation by acetone in blood and urine,16336
 furfuryl ammonium, pressor action,13178
 potassium, effect on:
 blood and urinary iodide,16336
 bone and cartilage, guinea pig,9212
 hyperthyroidism,14646
 radio-active isotope, use in I_2 metabolism studies,12643
 sodium, effect on endocrines, mice and rats,14629
 on metabolism after thyrotropin,14615
 Iodine. (See also *Thyroid*; *Thyroxin*; and specific iodine compounds.)
 absent from odoriferous gland of spider,3820
 balance, in nodular goiter,4288
 in blood. (See under *Blood*.)
 in city waters and vegetables, Texas,17327
 detn. in blood, distilling vs. dry ashing methods,9120
 effect on:
 creatinuria, hypothyroid children,14972
 exophthalmos of Graves' disease,11351
 nitrogen excretion, creatinuria and basal metabolism,14625
 uric acid metabolism,512
 function in amino N analyses by nitrous acid method,1917
 goiter in chicks and,17392
 hormone, detn. in blood,214
 Lugol's solution in therapy of hyperthyroidism,9661, 9662
 in mother's and umbilical cord blood,9423
 number, oleoresin of *Pinus*,2825
 in pituitary,2117
 placental permeability to heterologous proteins vs.,8146
 quinine, in malaria splenomegaly therapy,2665
 radioactive, absorption rate,3546

- relation to incidence of goiter, Hungary,14974
 requirement, rat,10959
 response in thyrotoxicosis, vs. thyroxin decay in myxedema,9651
 secretion by thyroid in vitro,375
 as a skin antiseptic,13189
 in thyroids of rats,11059
 tincture, bactericidal action on tubercle bacilli (bovine and human),11690
 in trichinosis therapy,8713
 in urine. (See under *Urine*.)
 Iodoacetate, effect on:
 dental caries,2012
 electrical potential and O₂ uptake of frog skin,9078
 mold metabolism,11766
 morphogenesis, *Rana*,9753
 selective permeability of erythrocytes,3553
 Iodoacetic acid, effect on:
 carbohydrate metabolism of tissues,12812
 dehydrases,7259
 intestinal absorption of fats,12643
 of sugars,9265
 muscle metabolism,11155
 phosphorylated riboflavin,2101
 tissue metabolism,12643
 muscle contraction and,12643
 Iodogorgic acid, prep. from iodoprotein,12807
 separation from mixtures,5490
 Iodophthalein, sodium salts, as gall-bladder antiseptics,13541
 Iodosal, effect on uric acid metabolism,512
 Iole (p.1881*) *olivacea* perplexa,10647
 Ion(s). (See also *Anions*; *Cations*; *Electrolytes*; *Salts*; and under specific ions, e.g., *Hydrogen ion*, *Sodium*.)
 absorbed by plants, taxonomic relations,6486
 adsorption on soils, methods of study,2928
 alkaline, effect on growth and metabolism, *Chlorella*,12058
 stabilization of nerve membranes by,12643
 antagonism, As, Rb, and Sr, toxicity to plants and,13974
 effect on:
 bronchi,14791
 Chlorella,12060
 heart,491
 intestine,9551
 oxalate ion,7251
 protoplasm elasticity, *Spirogyra*,17691
 reflexes,9077
 wheat absorption,1409, 4912
 excretion by roots, corn,13976
 mobility in cell surfaces, relation to partition coefficients and electric potentials,3070
 in *Elodea* membranes, light as affecting,13991
 in *Halicystis* protoplasm, guaiacol as affecting,3076
 in *Nitella* protoplasm,10311
 movement into and out of roots, kinetics,12057
 penetration into *Valonia*, kinetics, 3078
 in seed, rôle in germination,17874
 series, in colloid chem. and biology,12657
 in soil. (See under *Soil*.)
 translocation, in plant tissues,15720
 Ionium. (See *Radioactive substances*.)
 Ionization. (See *Dielectrolysis*; *Dissociation*.)
Ionomidotis (p.1862*), n. combs.,11813
 Ionophoresis. (See *Dielectrolysis*.)
 Ipidæ (Coleoptera), p.1876*
Ipcerus (p.1875*), *Bakeriella* n. name for,18016
Ipomoea (p.1867*), n. spp.,2828, 6437
 batatas. (See also *Sweet potato*.)
 phloem development and flowering,10172
 pes-caprae, chemistry and medicinal value,10289
 constituents and pharmacological activity,1322
Ips lecontei, infesting *Pinus ponderosa*,12119
Iresine (p.1865*), n. sp.,6437
 Iridaceæ (Monocotyledones), p.1865*
 Iridescence, in insects, best angles for lighting and viewing,10679
 Iris, of eye. (See under *Eye*.)
 Iris, forcing, temp. as affecting,10217
Iris (p.1865*), n. spp.,11854
 colonies and hybrids, analysis of,4771
 Iritis, in serum sickness,16907
 Iron, in anemia, dogs,3704
 antianemic effect,14512
 bacteria. (See *Bacteria*, *iron*.)
 balance, vit. B₁ as affecting, infant,2037
 in blood. (See under *Blood*; *Hemoglobin*.)
 catalysts, effect on lipid membrane formation,16302
 for tubercle bacillus,10090
 colloidal, use in preparing blood lipid extracts free from non-lipid extractives,16342
 compounds, effect on bacterial growth, and mechanism,6314
 retention on feeding,14551
 deficiency, in citrus trees, remedy for,8493
 effect on:
 hematopoiesis,2032
 tissue cytochrome oxidase activity, rat,14460
 vegetables, in greenhouse soils,2992
 detn., in biological materials,3532
 in blood,1914
 micro, photometric,9130
 photoelectric colorimeter,12727
 effect on:
 anemia of tuberculosis,7875
 gastric secretion, in hypochromic anemia,634
 growth of *Chilomonas*,12643
 hematopoiesis,14513
 after bleeding from peptic ulcers,647
 hemoglobin levels during pregnancy,16442
 Mn utilization, fowl,14552
 N assimilation, wheat roots,12098
 N-fixation by *Azotobacter*,10070
 post-malarial anemia, in paretics,5838
 regeneration of epithelium,649
 excess, as cause of chlorosis,8619
 in foods, availability,307, 5525
 in hereditary hypochromic anemia,13258
 as indicator in flocculation tests, malaria,6753
 intestinal absorption,12888
 intraven. effects in anemia,16911
 in liver pigments,14584, 14585
 in lymph nodes, dibenzanthracene as affecting,14911
 in marine zooplankton,10792
 metabolism in anemia, dog,10991
 metabolic fate,308
 reduced, as bacterial growth factor,17474
 effect on phosphatase activity, 9098
 vs. ferric in food, rat,9178
 for rice, sources compared,1351
 rôle in regeneration of Hb and hematin in anemia, rat,14510
 salts, effect on effectiveness of insulin,399
 in soil. (See under *Soil*.)
 as supplement to milk diet, for calves,17083
 therapy in anemia,4256
 low protein intake and,4247
 Iron (p.1875*) *pleuralis*, syn.,12410
 Irradiation. (See also *Lamps*; *Light*, and spectral portions of light, e.g., *Infrared*, *Ultraviolet*; *Radiations*, and specific types of radiation, e.g., *X-rays*; *Radio-activity*, and specific radioactive substances, e.g., *Radium*, *Thorium*.)
 alpha particles, effect on plant protoplasm,15752
 carbon arc, effect on blood and blood pressure,12643
 effect on:
 cancer of eyelids,14897
 cell, inherited cell structure and, 5472
 Drosophila pupae,1907
 glycolysis of tumors,13231
 growth of seedlings, wheat,17714
 inoperable cancer of digestive tract,14890
 keloids,18202
 mammary cancer,4183, 9593
 seed, *Hordeum vulgare*,1384
 serum phosphatase in leucemias,11274
 yeast cells,7283
 of ergosterol. (See under *Ergosterol*.)
 of tissue culture with short waves, 226
 tissue injury by,3569
 Irradiator, Strong, descr.,14491
 Irrigation, of *Cuscutaria* plants, malaria and, Madras,15970
 of citrus, Ceylon,13887
 small, tool for,15612
 of *Citrus* and walnuts, machinery for,1270
 effect on:
 apples, Nebraska,15620
 cereal smuts in seedling stage,1467
 corn, Italy,1176
 malaria, India,10508
 microclimate, in cotton field,2931
 soil salts, Alberta,8485
 methods, compared,4837
 of potatoes, effect of time on size and yield,2938
 to prevent mosquito breeding, ammonium sulfate for,12211
 of rice, effect on ground water level in Ark.,4821
 of sugar cane in Argentina, salt content as affecting,4835
 of tomatoes, fruit puffing due to, 17805
 Irrigator, for potted plants, new type,14033
 Irritability. (See *Chronaxie*; *Excitation*; *Impulses*; *Tropisms*; and irritable tissues, e.g., *Nerve*.)
 Irritation, rôle in tumor, production, 4216
 Isalon, effect on circulatory system, rabbit,11237
Isaria (p.1863*), n. sp.,15453
 fumosorosea, studies of,3225
Ischaemum (p.1864*), n. sp.,8427
 Ischemia. (See also *Anemia*.)
 myocardial, effect on coronary flow,11182
 pain of, ions as affecting,14749
 K and lactate as affecting,12643
 and renal hypertension, genesis,11181
Ischnochiton (p.1872*) *jervisenensis*,3295
Ischnochitonidae (Mollusca), p.1872*
Ischnoleiaps (p.1874*), n. spp. and hosts,17933
Ischnus (p.1878*), new species on hemlock sawfly,18025
Ischyropsalidae (Arachnida), p.1874*
Ischyropsalis (p.1874*), n. spp., 6833, 14242
Ishibaea (p.1863*) *julacea*, n. comb., 11845
 Islands of Laguesse. (See under *Pancreas*.)
 Islands of Langerhans. (See *Pancreas*.)
Isoachlya (p.1861*) *parasitica* (*Saprolegnia*),15467
 Isoagglutination. (See *Agglutination*.)
 Isoagglutinin(s). (See *Hemagglutinin*.)
 Isoelectric point, of cells,9086
 immunological relations,2589
 Isoetaceæ (Pteridophyta), p.1864*
 Isoetes (Pteridophyta), p.1864*
 of America, Tertiary and (K),18717
Isoetes (p.1864*) *japonica*, spermatogenesis, as affected by alcohol and acetic acid,7109
 virginica var. *pedmontana*,17507
Isoetes (p.1864*), new spp.,13717
 Isohemagglutination. (See *Hemagglutination*.)
 Isohemagglutinin(s). (See *Hemagglutinins*.)
 Isohemolysins. (See *Hemolysins*.)
 Isolation, effect on plant species,9035
 Isomannide, diuresis caused by,3688
 Isomerism. (See also *Asymmetry*; *Optical activity*.)
 optical, effect on utilization of N, N' dimethylcystine rat,9189
 inversion of d-cysteine and d-homocysteine in vivo,12808
 of tryptophane histidine and lysine, effect on growth,5537
Isodon obesulus, *Filarinema* from,14214
Isoturus, as "Q" fever reservoir,8196
Isoplexis (p.1867*), embryo-sac and endosperm haustoria,13786
 Isopoda (Crustacea), p.1873*
 entoderm elements, origin and fate in *Porcello* and *Armadillidium*, 9783
 eye development in *Idothea*,9794
 subterranean, growth and evolution,16498
 N-Isopropyl-β-phenylisopropylamine HCl, effect on central nervous system,532
 Isoptera, p.1875*. (See also *Termites*.)
 pests of *Derris*,12238
Isopterygium (p.1863*) *botaniti*, tax. and dist.,6371
 Isospondyli (Pisces), p.1879*
Isospora (p.1868*) *boughtoni*, from *Didelphis*,3270
 cruci, in *Hyla* spp.,12275
 † *isotilus gigas* (O), in Oklahoma,8756
 isothiocyanate, allyl, sensitization to, 873
 Isotomina (p.1874*) *lucifuga*,14277
 Isotopes, in metabolism studies, deuterium oxide,5548

- Isotopes (continued)**
 nitrogen,7419, 7421, 7422
 7423, 7424, 7425, 7426
 radioactive Fe,10991
 radioactive I,12643
 radioactive P,5544, 9171
 7448, 12818, 14547
 radioactive K,12824
 radioactive S,12811
 separation, relation to biology,7069
 Isovaleric acid, effect on anemia due to
 blood loss, dogs,13264
 Istiophoridae (Pisces), p.1879⁴
 Instituto di Sanità Pubblica [Rome],
 Rendiconti, origin,1687A
 Itch. (See *Dermatoses*.)
ITHACADICTYA (Por.) (p.1869²) *cornelli*
 (D),6775
Ivesia (p.1865²), revision,4784
 Ivy. (See *Hedera*.)
Izobrychus exilis, feeding habits,7027
Izodes (p.1874²), as vector of nuttalliosis,
 6756
 angustus, from mouse,1564
 marmotae, from marmots,6853
 ricinus, control, Great Britain,14141
 14142, 15916, 15919
 texanus, on *Marmota*,5253
 Ixodidae (Arachnida), p.1874²
Ixora (p.1867²), tax.,2859, 6405
 8437, 11878

J

- Jaagsiekte**, relation to epizootic pul-
 monary adenomatosis in sheep,
 17386
Jacana (p.1881²), new subsp.,1651
Jacaniidae (Aves), p.1881²
 Jack bean, globulins in, molecular wt.,
 1344
 Jackal. (See also *Canis*.)
Rickettsia canis susceptibility,8219
 Jackdaw. (See *Corvus*.)
Jacobinia (p.1867²), n. sp.,6437
 Jacobson's organ. (See under *Sense*
 organs.)
Janthinosoma (p.1877²), note,12371
 Japalin, bactericidal action,2638
 Japanese river fever. (See *Tsutsugamushi*
 disease.)
 Jarrah. (See *Eucalyptus marginata*.)
Jasminum (p.1866²), tax.,11889
 15483, 15503
 petaloidy of stamens,15522
grandiflorum, *Uromyces hobsoni* on, life
 history and pathology,17760
Jassa, critical notes,3307
Jatrorrhiza palmata, columbine from chem-
 istry,12019
Jaundice, acholuric, effect on fragility of
 erythrocytes,632
 atophan causing, man,16771
 blood cholesterol in,4243
 choleic acid elimination in,3758
 diagnosis, use of stool and urine uro-
 bilinogen detn. in,12728
 effect on sedimentation rate, guinea
 pig,11824
 epidemic catarrhal, virus (?) etiology,
 8197
 erythrocyte cholesterol in,7335
 forms,5592
 hemolytic, autolytic process in spleen,
 11311
 blood studies,11334
 clin. path.,7879
 congenital, anti-hemolytic factor, 639
 clin. path.,4246
 malarial, reticulocytes in,8685
 relation to anemias of malaria, 14931
 splenic P content,11312
 hemorrhage in, vit. K and,16551
 infectious. (See *Leptospira icterohaemor-*
 rhagiae.)
 liver changes in,5905
 neonatorum, mechanism,11273
 obstructive, bleeding tendency in, clot-
 ting test as measure,10944
 coagulation in, vit. K as affecting,
 1961
 diagnosis, serum phosphatase detn.
 value for,8261
 due to foreign body in hepatic ducts,
 with internal biliary fistula,
 12879
 hemorrhagic diathesis in, prevention
 and control by vit. K and bile
 salts,14514
 nature of erythrocytes in,16913
 vit. K as affecting prothrombin in,
 11330
 phenolphthalein action in,551

- Jaundice (continued)**
 serum, effect on phosphatase activity
 of normal serum,12643
 urine, green color reaction with para-
 dimethylaminobenzaldehyde,16328
 vit. K as affecting blood prothrombin
 in,7497, 7498
 vit. K deficiency in,16551, 16553
 Jaw. (See also *Bone, mandible*.)
 changes during metamorphosis, *Rana*,
 664
 decay in snakes,1010
 growth, postnatal, in cat,4357
Jaxea nocturna, in England,3306
 Jeffrey, John, biography,16132
 Jejuna. (See under *Intestine*.)
 Jelutong, blue stain, control,10381
 Jenner, Edward, contributions to concept
 of heart disease,5273
JEPSENIA † (Mamm.) (p.1883²),18094
 Jerusalem artichoke. (See *Helianthus*
 tuberosus.)
Jijimia (p.1869²) *tenuis*, validity,12302
 Jimson weed. (See *Datura*.)
 John's disease. (See also *Mycobacterium*
 paratuberculosis.)
 exp. in laboratory animals,15379
 of sheep, general account,11745
 Joint(s). (See also *Synovial fluid*.)
 absorption of substance from,2278
 diseases, progesterone as affecting, man,
 3923
 elbow, congenital malformations, man,
 1784
 protein passage from blood into, 14495
 recovery of polyarthritis agent from
 rat,16893
 shoulder, movements, analysis, termi-
 nology,9707
Jola (p.1862²) *javensis*, emend.,11820
 Jolly body. (See *Erythrocyte*.)
JOEANDRIUS (Col.) (p.1876²) *plani-*
 faciatus,8781
 Journal of the Entomological Society of
 South Africa, new periodical, 7086
 Journal of the South African Forestry
 Association, foundation of,1688
Jouvea (p.1864²), morph. and phyl., 10123
 Juglandaceae (Dicotyledones), p.1865²
 Juglandales (Dicotyledones), p.1865²
Juglans (p.1865²), (See also *Walnut*.)
 n. sp. (N),17475
 wood anatomy,17527
 Jugulares (Pisces), p.1880⁴
 Jujube. (See *Zizyphus*.)
 Julidae (Myriopoda), p.1873²
 Juncaceae (Monocotyledones), p.1864⁴
 chromosome no. and pollen develop-
 ment,17563
Juncus (p.1864⁴), n. syn.,1158
 pollen, develop.,17563
 June beetle. (See *Melolontha*.)
 Jungermanniaceae (Bryophyta), p.1863²
 Jungermanniales (Bryophyta), p.1863²
Juniperus (p.1864⁴), susceptibility to
 Corynebacterium *cardinale*,4967
 communis, embryogeny,10165
 nana, affinities,8425
 virginiana, oil of, fractionation,4905
 sporophylls and seeds,15523
Justicia (p.1867²), n. sp.,6437
 Jute, hypersensitivity to,6105

K

- Kafr.** (See *Sorghum*.)
 Kahn test. (See also *Syphilis, serodiagnosis*.)
 in infectious mononucleosis,11667
 tubes for, cleaning and sterilizing
 method,17332
Kakimia (p.1875⁴), n. spp.,8786, 18018
 Kala-azar. (See *Leishmaniasis*.)
Kalanchoe, overgrowths on, induced by
 dye,10364
 Kale. (See also *Cabbage*.)
 black rot (*Phytophthora campestre*), con-
 trol of chloropicrin,3169
 effect on winter milk,13359
Kalcephalus implicatus, from *Crotalus*,
 14216
 Kallecrein, effect on anaesthesia,4169
Kallymenia. (See *Callymenia*.)
Kalmia polifolia, chemical compounds
 found in,6544
Kaloterme (p.1875⁴) *papua*, on cocoa,
 14107
 Kalotermitidae (Isoptera), p.1875⁴
Kalymina (p.1864²) † *tuediana* (Cb),8368
KAMERUNOMUS (Diplop.) (p.1878²),8748
Kana (p.1875⁴), new species,18016
 Kaneko, Hideo, biography,8426
 Kangaroo, great gray, identical with
 Cook's,5245

- Kaoliang.** (See under *Sorghum*.)
 Kaolin, colloidal, intracranial pressure af-
 fected after intracisternal injec-
 tion,2319
 negative chemotropism of leucocytes to
 rabbits,5819
 Kaolinite, effect on phosphate fixation,
 by soils,13824
 Kapok. (See also *Bombax*, *Ceiba*, and other
 kapok-yielding genera.)
 botany, culture, and pests, E. Africa,
 4828
 Kaposi's disease. (See *Tumors, angioere-*
 ticuloendothelioma.)
KARDOCEPHALUS (Hom.) (p.1875²),
 n. sp.,8785
Karrucinella (p.1882²), n. ssp.,7023
 Karyokinesis. (See *Mitosis*; *Meiosis*.)
 Katadyn, in sterilization of T. A. B. C.
 vaccine,17190
 Kathaniidae (Nematoda), p.1870²
 Kauri pine. (See also *Agathis*.)
 growth, characters,1285
Kebuita (p.1871²), syn.,17962
 Keñr powder, effect on growth of lactic
 acid bacteria,4700
KEIFERIA (Lepidopt.) (p.1877²),16040
 Keloids. (See *Dermatoses*.)
 Kelp. (See *Algae*.)
Kelseyia, notes,10185
Keratella (p.1871²), n. sp.,6807
 Keratins, amino acid comp.,5447
 derivatives, serological behavior and
 properties,891
 sp. specificity,4346
 structure, micellar concept,17689
 Keratitis. (See under *Ophthalmia*.)
 Keratomalacia. (See *Xerophthalmia*.)
 Keratosa (Porifera), p.1869²
KERNIOMYCES (1861⁴) *costi*, on *C.*
 macrostachys,13738
Kesselia (p.1878²), syn. of *Trichobius*, 3337
 † *Keteleria* (p.1864⁴), of Oligocene,
 Germany,4724
 Ketene gas, effect on gonococci and
 meningococci,9959
 Ketones. (See *Acetone*; *Acetone bodies*.)
 β-Ketonic acid, catalytic decarboxylation,
 12669
 Ketonuria. (See *Ketosis*.)
 Ketosis. (See also *Acetone bodies*; *Acido-*
 sis.)
 as influenced by:
 anterior pituitary extracts,3874
 succinic acid and glucose as af-
 fecting,398
 citric acid and Na bicarbonate, 12643
 succinic acid, rats,9650
 ketolysis and,7444
 role in production of diabetic coma,
 4298
Khaya ivorensis, intumescences on,
 histology,10365
 Kidney. (See also *Diuresis*; *Nephridium*;
 Nephritis; *Ureter*; *Urine*.)
 ablation, calciferol as affecting blood
 Ca after,11024
 effect on antitoxin increase,6100
 on blood pressure, rats,7708
 absence of right, in pig,11456
 adenoma, embryonic, rabbits,4191
 adrenal rest in,696
 allergy in perfused, after sensitization,
 4521
 amyloidosis, tuberculosis and,7859
 benzylacetacetic acid cleavage in, 9407
 blood supply, accessory exptl. produc-
 tion,7516
 calcification, parathyroid adenoma and,
 7386
 cancer, frog, growth,14894, 14895
 hydrocarbons as affecting,11284
 virus as cause,593
 circulation, adventitious, omentopexy in
 establishment,7569
 clearance and, factors affecting,
 11086, 12643
 carotid sinus pressure as affecting,
 16649
 spinal anaesthesia and,9531
 urinary output and, phenol red and
 creatinine as affecting,9400
 citric acid production in,7571
 cortex, extract, pressor action,2300
 mitotic activity, rat,693
 necrosis, bilateral,7568
 deamination of alanine by,9192
 decapsulation, effect on renal function,
 dog,13006
 degeneration, choline-low diet as affect-
 ing, rat,12817
 denervation, effect on antidiuretic ac-
 tion of increased intracranial
 pressure,11091

Kidney (continued)

- denervation (continued)
unilateral, effect on uricosuric action of cinchophen, 9399
disease, ammonia formation in, 16647
blood comp. in, postmortem analysis, 1966
blood polypeptides in, 16411
climatic and socio-economic factors in, 995
functional disorganization in, 7568
hyperparathyroidism and, 14667
negative aerionization as affecting, 9532
efficiency, in malignant hypertension, 9527
extracts, phosphoric esters in, 14455
function, in adrenal insufficiency, 3945
in aged, 11087
effect on excretion of ascorbic acid, 2150
glucose utilization by extra-abdominal tissue and, 297
impairment, effect on skeletal muscle fluid, 7341
as influenced by:
adrenal and post-pituitary, rat, 7538
cobra venom, 12643
gum acacia, 12643
hypertension of childhood, 501
liver disease, 13015
muscular work, 2145
pyrethotherapy, in lepers, 257
renal hypertension, in dogs, 2268
glomeruli number and, man, 13014
osmotic, in chicken, 9402
unilateral, urinary diastase as index, 3940
glomeruli, capillaries, antigen-antibody reactions in regulatory mechanism, 4521
structure, 4341
circulation in, frog, 16651
cyst formation in, 11460
function in Bright's disease, 406
tests with Na ferrocyanide, 14673
intermittence, absence in dogs, 11094
tubules and, measurement of number, in hypertensive patients, 12643
glomeruloma, hist. path., 7646
glucose excretion in diabetic dog, 2144
glucose formed from acetoacetic acid in, 7434
glycolysis in tissue, 5659
grafts, effect on antitoxin increase, 6100
guanylic acid deamination by, cholic acid as affecting, 13022
histaminase in, in B-avitaminosis, rat, 12683
hyperemia reactive, 13026
hypernephroma, effect on hair growth, 9654
hypertension, induced by pexio of spleen or omentum, 9524
implants, inductive capacity in gastrula, Triton, 748
as influenced by:
anesthetics, 508
aortic constriction, 9517
atabrine, 7754
diet in nephrotoxic nephritis, 11092
opinephrin, glomerular and aglomerular fish, 11093
epinephrine, pilocarpine and atropine, 13161
exptl. hypertension, 5718
glycols, 9552
lead and As, rats, dogs, 9668
oxalic acid poisoning, 411
potassium salts in perfusate, 7573
sulfapyridine, rat and monkey, 7764
vit. A excess, 12836
ischemia, eclampsia-like syndrome in pregnant animals due to, 414
effect on blood pressure, 1166
hypertension and, 503, 2879
insufficiency, anemia, study, 1181
effect on hypertension, 2277
exptl. hyperparathyroidism and, dogs, 5857
after trypsin inj. into renal arteries, hypertension and, 2143
xanthoproteic and indican blood reactions in, 17835
lactoflavin in, 12848
lesions in chronic hyperparathyroidism, 9629

Kidney (continued)

- lesions (continued)
on low choline diet, methionine, cystine and choline as affecting, rat, 12777
lipid and glycerides, passage of fatty acids of food into, 7505
metabolism, in situ and in slices, 12794
uric acid as affecting, 13147
x-radiation as affecting, mouse, 14469
neutral red vs. phenol red elimination, frog, 14671
overstrain, cystine and cysteine in erythrocytes and urine and, 16655
O₂ consumption, urine formation and, 13020
pelvis and calyces, muscles, structure, 7976
permeability to polonium, 5427
plastic reconstructions of normal mammalian nephron, 15029
pressor substances, action, 933 F as affecting, 14822
bioassay, 12643
effect on blood pressure, 7738
age and, 4069
on renal blood flow and clearance, 11086, 12643
effects, 3952, 9406
in perfusate, 2138, 2142
purification, properties and, 5486
tachyphylaxis to, 12643
relation to hypertension of hydro-nephrotic rats, 4100
review, 7244
rhythmic mitosis, albino rat, 55
salt excretion, unilateral denervation as affecting, 5654
secretion of dyestuffs, mol. structure of dyes and, 11090, 12643
sulfanilamide excretion, 2146
sulphate excretion, 7564
threshold for uric acid, 13008
tissue, α-benzylacetoacetic acid hydrolysis by, 16653
growth in organ extracts, chick, 750
metabolism of butyric acid derivatives by guinea pigs, 9199
supravital staining, 11432
trauma, surgery in, 11088
tuberculosis, human vs. bovine bacillus incidence in, 13603
after lung disease, 13244
tubules, creatinine excretion by, 12643
proximal, epithelial cell shapes in, cat, 15028
tumor, mixed, child, 11287
vasoconstriction, urinary chloride and, 13023
vasoconstrictor substance, production, 7731
vascular supply, degenerating glomeruli and, mammals, 13294
x-ray examinations, value in difficult diagnoses, 1905
Kieselguhr, (See *Infusorial earth*.)
Killifish, Mexican, (See *Platyepocetus*.)
Kinase(s), (See under *Enzymes*.)
Kinesthetic sense, (See *Sensation, proprioceptive*.)
Kingfisher, as carrier of fish parasites, 8687
Kipper, smoke-cured, freezing and cold storage, 10033
Kirtland, J. P., biography, 3423
Kjeldahl determination, (See under *Nitrogen, determination*.)
KJELLBERGIODENDRON (Dicot.) (p.1866²), n. spp., 10127
Kjellmaniella (p.1860⁴) *crassifolia* gametophytes, 8374
KLATTIA (Platyh.) (p.1869²) *virginensis*, 12295
KLEBAHNOPYCNIS (p.1863⁴), (Fungi), 15453
Klebsiella, in colon group, 17464
pneumoniae, (See also *Pneumonia*.)
chemotherapy of infections, 9914
as influenced by sulfones, 17262
septicemia due to, 6178
specific substances, effect on tumors, rats, 4196
staphylococci antagonistic to, 11803
rhinoscleromatis, (See also *Bacterium r.*)
as capsulated organism, 870
carbohydrate antigen determining dissociation specificity in, 4470
dissociated, antiserum reactions with, 4470
phagocytosis as influenced by capsules and polysaccharides, 9873
polysaccharides, antigenicity factors, 9900
Klieneberger's organisms, relation to *Streptobacillus moniliformis*, 13693

L-organism, nature and significance,

- 2756
Kline test for syphilis, (See under *Syphilis, serodiagnosis*.)
Klossia (p.1868⁴), tax., 10528
Knaus, Warren, biography, 14327
Knausia (p.1867⁴), n. sp., 8444
Knee jerk, (See *Reflex, patellar*.)
Knight, Thomas Andrew, biography, 10703
Knightia (p.1879²), tax., 5161(E), 12431
Knorria (p.1863⁴), † dist. (D), 13716
Koebelia (p.1875⁴), transferred to *Stenocotidae*, 18017
Kohleria (p.1867²), n. sp., 6437
Kohl-rabi, (See *Brassica oleracea*.)
Kollonychia, (See under *Nails*.)
KOLOPHTERA (Hom.) (p.1875⁴), n. sp., 8785
Korthalsia (p.1864⁴), n. spp., 11864
Krameria, extracts, vacuum drying of, 1314
Kraunkha *Horibunda*, chlorosis, occurrence in Japan, 8622
Krumbachia (p.1869²), n. sp., and transfers, 6799
KUCKUCKIA (algae) (p.1860⁴), 11804
Kudzu, synthetic growth hormones as affecting, 12071
Kumquat (*Citrus*), dist. of sugars and pectin in rind and pulp, 6662
KUSABEA (Moll.) (p.1872²), n. spp., 5114
Kusta nut, from *Parinari laurina*, properties, 4870
Kuttlingeria (p.1862⁴), new species, 6364
Kymograph, roentgen, in detn. of heart size, 5720
Kynurenin, as formed from abrin, rabbit, 13144

L

- Labiatae (Dicotyledones), p.1867⁴
Labiodomus (p.1872⁴), n. sp., 3294
Labor, (See *Parturition*.)
Laboratory, animals, (See under *Animals*.)
apparatus for expts. on small animals, 227
bacterial content of air in, 2681
index, clinical diagnostic, 17859
medical, in Java, 1677
Labotigmina (p.1877³), n. sp., 14257
Labridae (Pisces), p.1880⁴
Laburnum (p.1866⁴) *anagyroides*, in Czechoslovakia, 10157
Labyrinth, (See under *Ear*.)
Labyrinthici (Pisces), p.1879⁴
Labyrinthodontia (Amphibia), p.1880⁴
Lac, culture, India, 14102
Lac insect, (See *Laccifer lacca*.)
Laccifer (p.1875⁴) *lacca*, life hist., 14102
Laccophilus (p.1876⁴), n. subgenus in, 10589
Lacerta (p.1880³) *erhardii*, subsp. of, 6976, 6988
muralis, liver wt./body wt. ratio in, 9246
serpa, bone fracture healing, histology, 713
Lacertidae (Reptilia), p.1880³
eye, sclerotic plates, structure, 5879
Lachemilla (p.1865⁴) *tanacetifolia*, 1140
Lachesilla (p.1875²), syn., 12414
Lachnocaulon (p.1864⁴) N. and Central American spp., 4769
Lachnum (p.1862⁴), n. spp., 11813
Lachnus (p.1875⁴) *roboris*, causing galls on *Quercus*, 8648
Lacrimal gland, (See under *Glands*.)
Lactalbumin, (See under *Albumin*.)
Lactaria (p.1862³), n. sp., 4737
Lactarius (p.1862³), tax., 8297, 11824
cytology of laticiferous cells, of basidium, 44
flexuosus, notes on, 6359
piperatus, oxidase from, chemistry, 6613
subdulcis, descr., 11824
volumis, chem. tests, 8386
zonarius, notes on, 6359
zonatus and flexuosus, distinctions, 17497
Lactate, effect on ischemic pain, 12643
on toxicity of nitro compounds, 14824
ethyl, toxicity, 4131
Na, effect on myotonic muscle, 11231
K and Ca, effect on blood pressure, 11192
Lactation, (See also *Mammary glands*; *Milk*; *Nursing*.)
book, 5667
Ca balance in, mice, 2166
deciduoma produced during, 7594
dietary factors in, rats, 7400

Lactation (continued)

- effect on:
 blood comp., cow,.....13036
 growth of mammary carcinoma, mice,.....583
 K balance, rat,.....3967
 energy metabolism in, cattle,.....287
 fasting as affecting blood fats in, cow,.....305
 foster nursing, effect on incidence of breast cancer, mice,.....16832
 immunity transfer to calves by,.....6125
 to newborn by,.....6098
 as influenced by:
 antuitrin-S, rat,.....9315
 cortico-adrenal substitutes, adrenal-ectomized rats,.....13049
 l-cystine, rats,.....7406
 gonadotrophin,.....9323
 lactogen-cortin-glucose, rat,.....3889
 pituitary extracts, deer,.....9308
 prolactin and thyrotrophic hormones, cow,.....7584
 testosterone, man,.....13041
 thyroidectomy,.....12643
 vit. B₁, Mn and,.....12847
 in massive doses, rat,.....16528
 lactogen in pituitary in, rat,.....2168
 non-, relation to breast cancer, rats,.....16834
 plasma phosphatase changes during, man,.....14689
 protein anabolism during, rat,.....7598
 protein yield from,.....4415
 rôle of pituitary in,.....11413
 thyrotrophic hormone in pituitary during, rat,.....14648
 vit. A and carotinoids in blood in, Batavia,.....318
 vit. C metabolism in, man,.....7580
 vit. C requirements during, man,.....9431
 Lacteals. (See *Lymphatics*.)
 Lactic acid, in acidified green fodder silage,.....17398
 benzoization,.....13091
 in blood. (See under *Blood*.)
 dehydrogenation,.....13090
 detn.,.....5485
 in blood,.....3586
 micro-, enzymatic,.....12723
 dextro-, rapid fermentation process for,.....11773
 effect on blood pressure,.....11192
 formation, in fermentation,.....1890
 by *Rhizopus* sp.,.....4696
 from sugars, catalysis by anions of weak acids,.....9088
 metabolism, anemia as affecting, heart-lung prep., dog,.....9184
 retina and chick embryo,.....10982
 in metabolism of leucemic cells,.....9617
 in muscle. (See under *Muscle*.)
 oxidation, in localizing B₁-avitaminic cerebral lesion, rats, fowls,.....5849
 -racemizing enzyme of *Clostridium butylicum*, properties,.....6260
 Lactobacilli, in dental caries,.....2644
 as influenced by kefir powder and "Kefemon",.....4700
 Lactobacillus, effect on wine,.....10039
 growth factors for spp.,.....17470
 peptidase,.....2749
 type moroi, purulent meningitis due to,.....17803
 acidophilus. (See also *Bacillus a.*)
 dental caries relations,.....15297
 diabetic children,.....15038
 as influenced by kefir powder and "Kefemon",.....4700
 by saliva,.....6032
 inhibitory factor for, in saliva of caries-free vs. susceptible cases,.....4459
 oral strains, viability and maintenance,.....10093
 oral vs. intestinal strains, implantation in intestines of rat, 2650 non-identity,.....2650
 vulgaricus. (See *Bacillus b.*)
 delbrueckii. (See *Bacillus d.*)
 helveticus, in Swiss cheese starter cultures,.....1037
 lactis. (See *Bacillus lactis acidii*, *Lactobacillus lactis acidii*.)
 lactis-acidii, vit. C synthesis by,.....2734
 odontolyticus, electric conductivity vs. pH,.....2745
 pentoceticus, proteolytic and fermentative effects on clover silage, 1029 in silage,.....1028
 plantorum. (See also *Streptobacterium p.*)
 metabolism of R vs. S variants, 2777 racocis. (See *Alcaligenes v.*)
 Lactoflavin. (See *Flavins*.)

- Lactose, bacteria fermenting (slow), 17449
 beta, test for,.....6010
 in cow's milk,.....9815
 detn. in sugar mixtures,.....16386
 low-milk solids in ice cream,.....13368
 in milk, dairy breed comparison, 15110 from fasted cows,.....13362
 from whey, recovery,.....11498
 Lactuca (p.1867⁴), cytogenetic studies,.....5294
 n. sp.,.....8444
 sativa. (See also *Lettuce*.)
 Ladenbergia (p.1867³), n. sp.,.....6437
 Ladybeetle. (See *Coccinellidae*.)
 Laelaps (p.1874⁵) microri, on *Pitymys*, 5231
 Laeticephalus (p.1875⁹), n. spp.,.....1629
 Lagenaria (p.1867³), vulgaris, cell size and fruit size correlations,.....10171
 Lagenidae (Protozoa) p.1868³
 Lagenospermum (p.1864³), *imparirameum* (Cb),.....10095
 Lagomorphs (Mammalia) p.1882⁸
 Lagoons, malaria and, India,.....14191
 saline, flora and fauna, ecology, Eng-land,.....9042
 Lagopus (p.1881²) lagopus, brooding in,.....8338
 lagopus, tax. of Japan,.....8851
 scoticus, behavior, breeding notes, 14299
 Lakes. (See also *Limnology*.)
 algae production in, factors affecting,.....5397
 alkalitrophic, P deficiency,.....12610
 alpine, classification of Austrian, 10803
 classification and fauna, review,.....12614
 Amsolding, plankton distr., Switzer-land,.....3522
 aquatic plants, photosynthesis,.....7230
 artificial, chemistry, Brazil,.....16275
 bacterial distr. in,.....10091
 biological survey of British Columbian, bog, vertical distr. of temp. in,.....5400
 bottom deposits, heterotrophic bacteria in,.....8357
 survey, Formosa,.....10802
 bottom fauna of Esrom,.....16274
 brush shelters for fish in Michigan,.....9060
 CO₂ tension, tolerance of fish for sudden changes in,.....10810
 Canadian, mollusca,.....12612
 Champlain, white fish populations in, comparison,.....14423
 chemical and physical analysis, large aquatics and,.....7229
 chemistry of waters as factor in fish production,.....14417
 chironomid fauna,.....9043
 Constance, fish culture, scientific man-agement,.....12623
 creel census of fish in Wisconsin, 14409
 epiphytic diatoms in German,.....9047
 fauna in algal growth mats, Germany,.....12611
 Fife, creel census of fish, Michigan,.....14408
 fish management in,.....14411, 14412
 fish-parasite relations,.....8687
 fish population, Michigan,.....9051
 Nova Scotia,.....10814
 fish yield of Wisconsin,.....7235, 7236
 form changes of *Daphnia* in Italian,.....14402
 fresh water studies, concepts and trends in,.....12609
 game fish, survey,.....145
 growth of buffalo-fish in Wisconsin,.....9053
 Huron, whitefish, biology,.....9061
 Japanese, stratification of dissolved O₂ in,.....14404
 light measurements in inland, methods,.....10760
 light penetration, methods of measure-ment,.....140
 limnological survey, Connecticut,.....3524
 mineral content and productivity, of Wisconsin,.....7225
 natural productivity,.....5399
 of northern U. S., insect fauna, ecology,.....8999
 Norwegian, conductivity measurements,.....12615
 physico-chemical study,.....3525
 plankton, abundance, Michigan,.....1851
 -algae production in, survey,.....5398
 quantity and seasonal variation, Michigan,.....5395
 sampling,.....138
 seasonal and annual variations, 139
 productivity, solar radiation and, 7224
 Reelfoot, vegetation zones, Tennessee,.....10781

Lakes (continued)

- salt and volcanic, high acidity, cause,.....5394
 sediments in Connecticut, pollen analy-sis,.....16255
 silica and diatom content,.....7231
 solar radiation measurements,.....8991
 of Wisconsin,.....7234
 Spavinaw, stocking with bass,.....16276
 sponge populations, Indiana,.....10770
 dist. in relation to Ca and Mg Wisconsin,.....3498
 transparency, measurement and sea-sonal change,.....1854
 relation to organic content and bac-teria,.....7233
 treated with derris root, effect on yellow perch,.....12619
 trout, management and productivity, book,.....7239
 vegetation, Sweden,.....10790
 Lamachus (p.1878⁸), new species on hem-lock sawfly,.....18025
 Lamarckism. (See *Acquired characters*.)
 Lamb(s). (See *Meat*; *Sheep*.)
 Lambesaurinae (p.1880⁴), proboscis in, disc.,.....14291
 Lambia. (See also *Giardia*.)
 Lameness, in horses, diagnosis and ther-apy,.....15357
 Lamina. (See *Leaf*.)
 Laminaria (p.1860⁴) spp., gametophytes,.....8374
 Laminariaceae (Algae), p.1860⁴
 Laminidae (Elasmobranchii), p.1879¹
 Lampnactes (p.1879⁸) steinbecki,.....16049
 Lampetra (p.1878⁸), nomenclature, 18041
 lanottienii, larvae, ecological relations in,.....5152
 Lampornis (p.1881³), food habits,.....9064
 Lamprey, brook. (See *Lampetra lamottienii*.)
 marine, biology and economic impor-tance,.....9052
 Lampride (Pisces), p.1879⁴
 Lampris (p.1879⁴) luna, from Vancouver Island,.....8377
 Lamprocytis (p.1872³), n. sp.,.....5114
 Lamprogaster (p.1877⁴), n. spp.,.....14254
 Lamprospora (p.1862¹) minuta, spore char-acters,.....11815
 Lampsana communis, Bremia on,.....8408
 Land, management practices, burning as tool in,.....12590
 reclamation, effect on malaria, Italy,.....8696
 utilization, Great Britain,.....10785
 Land bridges, of the Pacific,.....34
 Langerhans, Islands. (See under *Pancreas*.)
 Language. (See *Speech*.)
 Laniatores (Arachnida), p.1874¹
 Laniidae (Aves), p.1882²
 Lanolin, antigen mixture, immunization value,.....4478
 effect on rinderpest vaccine,.....13593
 Laonome (p.1871³), syn.,.....17962
 Laphygma frugiperda, on cotton,.....5034
 on maize, control,.....17878
 Laportea (p.1865³), n. spp.,.....15505
 Lappida (p.1875³), n. sp.,.....8785
 Lapsana (p.1867⁴) n. sp.,.....2383
 Lapwing, ecology, population dynamics, England,.....14297
 Lar (p.1869²) sabellarum, nematocysts of,.....3278
 Larch. (See also *Larix*.)
 distr. in Lombardy (Italy),.....8530
 injury due to June beetle, Finland,.....12201
 to Semasia, Switzerland,.....15909
 parasitism by *Usnea*,.....17847
 resin duct,.....13785
 wood wasp damage and control,.....15926
 Lard, chlorinated, pathol. effects,.....11304
 Lardizabalaceae (Dicotyledones), p.1865³
 Larentiinae (Lepidoptera), p.1877¹
 Larix rufimana, on beans,.....5044
 Laridae (Aves), p.1881³
 Larifuga (p.1874⁴) capensis, odoriferous glands,.....3320
 Larifugella (p.1874⁴) natalensis, odoriferous glands,.....3320
 Larix (p.1864⁴). (See also *Larch*.)
 timber quality in relation to growing conditions,.....15653
 decidua-L. occidentalis hybrid, triploid, economic value,.....5321
 europea, distrib. in Rumania,.....15514
 Larspur. (See *Delphinium*.)
 Larrea (p.1866⁶), in dung of ground sloth,.....7048
 Larus (p.1881³) argentatus, recovery of banded,.....7006
 canus, habits,.....16102
 olfactory organ, development, 4383
 pituitary, Plagiocris in,.....17942
 Larvicide(s). (See *Insecticides*.)

- Laryngitis, in small animals, chemotherapy,11601
- Laryngotracheitis, avian virus-induced, path. as influenced by virulence and infection route,6171
- Larynx, complement titer after surgery in,2587
- innervation,11400
- tuberculosis,17321
- after pulmonary disease,13244
- Lasiocampidae (Lepidoptera), p.1876²
- Lasiocarpine, toxicity,13178
- Lasiurus (p.1882²) cinerea, breeding in Penna.,5222
- seminolus, food,7038
- semotus, lectotype,18105
- Lasiurus niger americana, on maize, as affected by crop rotation,17865
- Laspeyresia molesta, parasitism by Asco-gaster and Macrocentrus together,10456
- Lateral line organs, sensory cells, colored granules in, amphibia,8003
- Latex. (See also Laticiferous tissue; Rubber.)
- from Ficus, as anthelmintic,15696
- outflow, effect on osmotic pressure, Ficus,6626
- in Palaequium leaves, origin and chemistry,4908
- rubber formation in, tau-saghyz, 17710
- of Sarcostemma acidum,3045
- Lathyrus (p.1866²), tax.,1158
- chemico-genetical relation of antho-cyanins,12519
- Laticiferous tissue. (See also Latex.)
- in Papaveraceae, note,2906
- tube, arrangement and occlusion, Hevea,6625
- recovery after puncture, Euphorbia,6624
- Latimeria (p.1879²) chalumnae, descr.,18049
- Latitude, effect on growth of timothy,8981
- Latonopsis (p.1873²), species endemism,12819A
- Latrodectus (p.1874²) mactans, antivenin production against,9888
- parasites and habitat, Southern California,5069
- v. bishopi,3319
- Laughlin test, for syphilis. (See under Syphilis.)
- Lauraceae (Dicotyledones), p.1865²
- Laurus (p.1865²) + plutonia (K), from Minnesota,17476
- Lauryl compound, detergents from and commercial possibilities, chemistry,12045
- Lauryl thiocyanate. (See under Thiocyanates.)
- Lauterborniella (p.1877²) marmorata, ♂ described,6900
- LaWall, Charles Herbert, biography, 3424
- Laxative(s). (See Cathartics.)
- Leaching. (See Soils.)
- Lead, deposition in chronic poisoning, rat,4132
- detn.,9117
- in biological materials,1915, 1923
- effect on:
- forest trees,1410
- growth and reproduction, rat,3703
- liver arginase,3558
- tensility of rat's aorta,4076
- effects of ingested, dog,14544
- exposure, basophilic erythrocytes and vs. silicosis,5875
- in food, review,7925
- in maple syrup, sources and method of removal,1348
- metabolism and retention, rats,5877
- physiological effects of small doses,5874
- poisoning, black gums caused by melanine, Java,4300
- diagnosis, blood studies and,9870
- dietary treatment,2033
- effect on anthrax immunity,17185
- electroencephalogram, cat,12643
- lead as affecting phosphocreatine in muscle in,11158
- normal basophilic aggregates in newborn humans and rats, 10916
- tissue injury in, rats, dogs,9668
- salts, in syphilis therapy,11592
- in spray residues, effect of apple constituents, on retention, rat,14550
- in tissue, man,10989
- toxicity and storage, Ca and P as affecting, rat,3701
- Lead acetate, chronic oral toxicity,4106
- Lead arsenate. (See Arsenicals.)
- Leaf. (See also Aphlebia; Buds; Phyllo-taxy; Sporophyll; Stomata; Transpi-ration. (For cotyledones see under Seed and Seedling.)
- abnormalities, x-radiation of seed caus-ing, cotton,14013
- amylase activity in, factors affecting,12106
- anatomy, in Allotropa,2853
- in Artemisia,4308
- Cu and Zn deficiency as affecting,6664
- in Ctenium,13745
- ecological, comparative,4803
- in Lepidium,4813
- in Myrmecodia,2916
- physiology and relation to disease, sugar beet,6488
- in Picea,2826
- in pine,15485
- in Pseudotsuga,2823
- relation to transpiration and drought resistance, fruit trees,13888
- in Ruscus cladode,11924
- in Saltz,17559
- in Solenostemma,11899
- in spruce,1112, 6447
- in Tricholaena,11916
- variations in Acer, phylogeny and in Xyris,2839
- area, P as affecting, tobacco,15700
- sprays as affecting,17862
- ascorbic acid in, temp. as affecting, Bryophyllum,1399
- ash content. (See also Foliar diagnosis.)
- tomatoes,15730
- atavistic forms,11853
- autumnal, anthocyanins in, 1404, 15776
- bud, development, winter oil sprays as affecting, pear,3178
- burn, cyanamid causing,2991
- K as affecting, apples,1237
- Ca, Mg, and K contents, mathematical expression of ratio,3058
- carbohydrates, detn. wheat,17719
- carbohydrate metabolism,17720
- K as affecting,8585
- during starvation, wheat,14017
- carotenoids in, correlated with develop-ment period of plant,8576
- changes induced by ensilage, alfalfa,1202
- chlorophyll in, clover,14007
- diurnal movements in Phaseolus, causes,1406
- dry wt. and S content, variations, Helianthus,8598
- effect on flower-bud formation, fruit trees,2988
- embryonic, hydathode development in Spartina,11929
- epinasty, chemicals causing,6614
- extracts, gonadotrophic action,9306
- fiber origin and length measurements,10169
- growth, Hedera helix,1376
- water as affecting, date palm,13897
- hardiness in conifers, factors affecting,14025
- injury, from water-soaking,17807
- juvenile, use in plant breeding,15747
- ligule, anatomy in Gramineae,6450
- lipids secreted by epidermis,4957
- minerals in grape, var. differences,13895
- nectaries in Osmanthus,10144
- N compounds in, tobacco,4945
- ontogeny, in Artemisia,4808
- in conifers,6446
- in Cycas,11917
- in Lycopodium,6374
- osmotic pressure in, colloids as affect-ing, conifers,13995
- grasses,13996
- pectase isolated from,4865
- persistence, light and temp. as affecting, Platanus,4942
- photosynthesis when lighted on only 1 side,12085
- physical characters, relation to severity of insect attack, bean and to-mato,1495
- pigments, chromatographic method of study,12102
- potassium in, as measure of K in soils,13852
- protein in, light quality as affecting,8591
- value as samples and factors affect-ing,8589
- resistance to Hessian fly infestation,17872
- respiration, N and P as affecting,8581
- Leaf (continued)
- rôle in phototropism, Helianthus,6615
- roll, temp as affecting, Prunus,13871
- stipule evolution in Myrmecodia,2916
- stomatal index, ecological significance,9027
- submersed, transpiration in,4938
- sugar in extracts, clarification method in detn.,3100
- sugar metabolism in,8583
- S compounds in, nutrient materials as affecting,17717
- surface, CO₂ assimilated per unit area, annual plants,7194
- electric potentials as affecting spray deposits on,10471
- relation to comp. and flavor of grapes,1250
- spray volume as affecting,5053
- temp., measuring apparatus for,10754
- surface-root ratio, effect on transpira-tion, lemon,15744
- temp., drops of water as affecting, 6621
- transpiration as affecting,4937
- tissue organization vs. vein distr.,10173
- traces (See under Vascular system.)
- transpiring, humidity gradient at sur-face,6598
- vascular system as aid to taxonomy,8433
- volume, intercellular, detn.,6451
- water absorption, stomata as affecting, tobacco,15791
- daily variations, sugar content and Themedra,12092
- Leaf-hopper(s) (See also under specific leaf hoppers.)
- pale apple, control,10400
- on rhododendron,17881
- six-spotted, control,12199
- Leaf miners, on leaves of trees,5058
- Leaf roller, gray banded, sex ratio, 10389
- of strawberry, insecticides for,10396
- Leander (p.1874²) adpersus, distal retinal pigment, light intensity as affect-ing,442
- rectirostris, thoracic legs, regeneration,11470
- Learedius (p.1870²), syn.,6788
- Learning. (See also Behavior; Reflexes, conditioned.)
- acquaintance law,2194
- brightness preferences of rats,2188
- delayed instructions, effect on human performance,2186
- discrimination, inclined plane, sub-cortical mechanisms in,2175
- pattern after occipital lobectomy, monkeys,16671
- problems, chimpanzees,7612
- rat,9445
- repetitive errors in,7617
- of double alternation problem in tem-poral maze, dog,16672
- emotions, as affecting, man,2181
- extinction resistance, strength of drive at time of extinction as affecting, rat,16674
- habituation and,7606
- handedness of rat, cerebral destruction as affecting,3994
- in lower animals, Marburg studies,14690
- in marine animals,7625
- maze, acquisition and retention, vit. B deficiency as affecting, rat, 9447
- distr. of muscular action potentials during,7618
- as influenced by:
- cortical destruction, rat,2190
- reintroduction of inappropriate re-ward, rat,2180
- periods of wakefulness,3980
- rôle of stim. in, specificity vs. pattern-ing, rat,9441
- motor, length of practice period and efficiency in,5682
- retroaction and gains in,11117
- multiple choice problem solution by chimpanzees,9450
- partial, transfer of training from, after varying intervals of time, rat,16668
- reactions, absolute shift in affective value conditioned by,2184
- retention effects on affective judg-ments,2185
- retention and, time interval as affect-ing,2178
- retention and transfer, cerebral lesion as affecting, rat,16669
- speed and efficiency relationship,2189

- Learning (*continued*)
 subcortical mechanism in, 2173
 transposition, by children, 2175, 2176
 response as a function of no. of
 transposed dimensions, 11119
 trial-and-error, rat, 9442
 Leather, mangle as affecting, 10440
Lebistes (p.1879³) *reticulatus*, embryonic
 development, 11445
 nicotine as affecting, 9565
 sex linkage, 3486
 swimbladder, response to sudden pres-
 sure decreases, 5604
Lecane (p.1871³), n. spp., 6805, 6807
Lecanium (p.1875⁴) *corni*, host-determined
 variations, 3347
Lecanora (p.1862³), tax., 6364, 8412
 15473, 15475, 17503
Lechiorchis sp., in *Amphiuma*, 6716
Lecidea (p.1862³), new species, 1089
 1090, 6364, 15475, 17503
pringlei, redescr., 8412
 Lecideaceae (Fungi), p.1862³
Lecithaster, n. spp., 6803
Lecithin. (See also *Lipids*; *Phospholipids*.)
 alpha and β , separation, 16384, 16385
 a constituent of chromosomes and
 nucleoli, 1713
 and Cu, in trichinosis therapy, 8713
 detn. in body fluid and tissues, 16377
 effect on bacteria in broth culture,
 17305
 on complement, and mechanism, 927
 extraction from lecithino-ovalbumen,
 7302
 in milk, relation to oxidized flavor,
 2480
 in organs, man, 10378
 in plasma and erythrocytes, in pernicious
 anemia, 2394
 -protein complex, prep., 7302
 in tissues, effect on bacterial intoxica-
 tion, 13405
Lecithochirium (p.1869⁴) *japonicum*, 6803
Lecithocladium (p.1869⁴) *johnii*, 6803
Lecithodendriidae (Platyhelminthes),
 p.1869⁴
Lecithodendrium lynchi (Inga), 1598
Lecithophyllum (p.1870²) *fusum*, 6803
Lecithostaphyllum (p.1870²) *spondylosomae*,
 in fish, 5108
Lecudina (p.1868⁴) *brasili*, cytoplasmic in-
 clusions, 1732
Lecudinidae (Protozoa), p.1868⁴
Leeches, epinephrine and sympathin in,
 9384
Leefmansia (p.1878⁴) *bicolor*, as parasite of
Sesovia spp., 8635
Leek (s). (See also *Allium porrum*.)
 hemolysins from, 2538
Leeuwenhoek, biography, 7074
Leeuwenhoekia (p.1874³) *australensis*, from
 New Guinea, 17980
Leg(s), of invertebrates. (See *Appendages*.)
 of vertebrates. (See *Limbs*.)
Legume(s). (See also *Legume nodule bac-*
teria; and specific legumes, e.g.,
Clover, *Pear*.)
 acid and carbohydrate content, Indian
 vars., 6454
 crops, tolerance to soil As, 15933
 culture and value for hay, Tenn., 1193
 emergence from soil, soil type as af-
 fecting, 2951
 ensilage from, methods of making, 6478
 of Great Britain, book, 11857
 as green manure for rice, Ceylon, 13827
 in West Indies, 1207
 methods of curing, 13352
 N fixation by, soil factors in, 17419
 nodulated, N-absorption by non-legumes
 from, 8344
 nodulation, carbohydrate supply as af-
 fecting, 8343
 in relation to self- vs. cross-pollina-
 tion, 8352
 nodules. (For non-leguminous root
 nodules, see *Root, nodules*.)
 chromosome numbers, *Pisum*, *Tri-*
jolium, *Vicia*, 49
 of Puerto Rico, feed value, 13793
 starch in seed, specific and var. dif-
 ferences, 17740
 symbiotic promiscuity in, factors affect-
 ing, 17441
 tropical, nodule bacteria of, study,
 17421
 winter annual, breeding expts., 13819
 of Wisconsin, book, 10131
 Legume nodule bacteria. (See also *Nodule*
bacteria; *Rhizobium*.)
 cross-inoculation groups in Ceylon, 8344
 culture and inoculation, 1046
 distr. in Piedmont soils (S. Carolina),
 2744
 effect on seed comp. in soybean, 11786
 excretion products of root nodules,
 15409
 growth-factor requirements, 8351
 host specificity in *Medicago* group, 10069
 as influenced by bios, 2742
 by H., 8353
 mechanism N fixation by, 15409
 review, 17440
 soil factors in, 17419
 mechanisms of nodule formation by,
 17439
 soybean, duration of viability and ac-
 tivity, 11786
 soybean varietal responses to inocula-
 tions by, 13638
 symbiosis, carbohydrate-N relations in,
 11788
 symbiotic promiscuity of legumes for,
 17441
 symbiotic relations, 13639
 of tropical legumes, cross inoculations
 with cowpea group, 4701
 in tropical plants, 17421
 Leguminosae (Dicotyledones), p.1865⁴
 chromosome number relationships, 3450
Leioheterodon (p.1880⁴) *madagascariensis*,
 notes on eggs and young, 3401
LEIOMODESMUS (Diplop.) (p.1873³),
 5124
Leiostomus (p.1880³) *ganthurus*, blood cell
 morphology and blood coagulation
 time, 5384
Leiphamos (p.1866⁴) *brachyloba* var. *cum-*
brensis, 13788
Leipoa (p.1881²) *ocellata*, breeding habit,
 18071
Leishmania (p.1868³). (See also *Herpeto-*
monas; *Leishmaniasis*; *Phlebotomus*.)
 culture medium for, 5085
 development in sandfly, exptl. studies,
 17896
 in *Phlebotomus*, natural infection,
 17893
canis, culture in vitro, 13617
chagasi, in *Phlebotomus*, 14156
donovani, in macrophages in kala-azar,
 673
infantum, culture in vitro, 13617
tropicalis, culture technique, 17912
 morphology in culture, 17928
 transmission by flies, 13639
 vaccination with live cultures, 15175
Leishmaniasis. (See also *Leishmania*;
Phlebotomus.)
 canine, exptl., development in sandfly,
 17896
 with skin lesion, Peiping, 12250
 cantharides blister for detecting, 13625
 complement fixation in, by W. K. K.
 antigen, 8126
 cutaneous, descr. and vector, 1006
 fuchsin-paint therapy, 11581
 immunization, with live cultures,
 15175
Phlebotomus as vector, Italy, 6738
 transmission by flies, 13639
 epidemiology, Sudan, 6740
 exptl. infection of sand fly, 14156
 kala-azar, chemotherapy, 11609
 by neostibosan or faldin, effect on
 white blood picture, 822
 by solustibosan, 2666
 by ureastibamine, 2666
 culture of *Leishmania* from, 5035
 pathogenesis and path., 15262
Lemanea (p.1860⁴) *fluvialilis*, in Australian
 Alps, 8379
 Lemnaceae (Algae), p.1860⁴
Lemboisia (p.1861⁴), n. spp., 17498, 17500
 Lemming(s). (See *Lemmus*.)
 Lemmon, John Gill, biography, 16135
Lemmus (p.1832⁴) *lemmus*, blood used by
Aedes, Lapland, 3202
Lemna, growth of roots, interrelations of
 K and light, 8575
 major, vitamins in, formation and effect
 of storage, 15736
Lemnaceae (Monocotyledones), p.1864⁴
 Lemon(s). (See also *Citrus*.)
 cover crops for seedlings, 10216
 decline disease, relation to rootstocks
 and soils, 8489
 dry rot (*Deuterophoma tracheiphila*),
 control, 6627
 orchard, protecting against frost, use of
 infra-red lamps in, 8517
 respiration, methods compared, 14018
 rootstocks for, 8489
 in storage, chemical changes during,
 14035
 thrips on, tartar emetic as insecticide,
 10338
 transpiration of cuttings, leaf-root ratio
 as affecting, 15744
Lempholemma (p.1862³), n. spp., 15475
Lemur, *Acanthocephala* in, 3286
 insectivorous, notes, 5237
LEMUROPISTUM (Dicot.) (p.1865⁴) *adnla*,
 11877
 Lens. (See under *Eye*.)
 Lenticulariaceae (Dicotyledones), p.1867⁴
Lentinus lepidus, longevity in wood, im-
 mersion as affecting, 5003
Lenzites (p.1862³) *gibbosa*, wood rot of
 deciduous trees due to, 14042
trabea, longevity in wood, immersion as
 affecting, 5003
 Leodicidae (Annelida), p.1871²
Leontopodium alpinum, distrib. in Rumania,
 2891
 Leopard, spinocerebellar tract degenera-
 tion in, 12643
Lepadella (p.1871³), n. sp., 6807
Lepanthes (p.1865³), n. spp., 2828A, 2840
Lepechinia (p.1867³), n. sp., 2882
Lepidagathis (p.1867³), n. spp., 15483
Lepidapedon (p.1869³), n. spp., 6803
Lepidaplois (p.1880³) *mirabilis*, synonymy,
 5155
Lepidium (p.1865³), notes, 10135
alyssoideis, native host of beet leaf-
 hopper, N. Mex. and Tex., 8645
draba, anatomical development, 4813
virginicum, in France, 17544
Lepidochitona (p.1872³) *cineurus*, mantle
 cavity, 16011
Lepidocyclus (p.1868³), *parva* (N), 10517
† tournoueri (E & N), Spain, 14198
Lepidocyrtinus (p.1874⁴) *annulicornis*, de-
 scrip., 2368
 Lepidodendraceae (Pteridophyta), p.1863⁴
 Lepidodendrales (Pteridophyta), p.1863⁴
Lepidophora (p.1877³), n. sp., 6903
Lepidophyta (Pteridophyta), p.1863⁴
Lepidopilum (p.1863⁴) *virens*, transf. to
Pseudolepidopilum, 11839
 Lepidopleuridae (Mollusca), p.1872³
Lepidopleurus (p.1872³) *asellus*, mantle
 cavity, 16011
Lepidoplois (p.1880³) *mirabilis* (*Lienardella*
fasciata), 5155
 Lepidoptera, p.1876⁴. (See also *Butter-*
flies; *Caterpillars*; *Moths*.)
 larvae, cannibalism among, 10766
 predatory, 14102
 taste thresholds, 13054
 male genitalia, 16042
 pests of *Derris*, 12238
 prothoracic glands, 16041
 taxonomy of syntomidae, 16043
 of U. S. and Canada, check-list, 3356
 wing pattern, 10615
Lepidosaphes (p.1875⁴) *beckii*. (See also
Scale, purple.)
 as affected by spray residue, popula-
 tion of, 5019
ulmi, hatching, low temp. as affecting,
 8983
Lepidosiren (p.1879³), pituitary, anatomy
 and development, 5899
paradoxa, neural histology and anatomy,
 2437
 Lepidosirenidae (Pisces), p.1879³
Lepidospartum, in California (N), 17475
Lepidosperma (p.1864⁴) *perplanum*, 8428
Lepiota (p.1862³), n. spp., 8403
Lepismatophila (p.1868⁴) *ctenolepismae*,
 from silverfish, 12287
Lepocreadium (p.1863³) *clavatum* (*Lepo-*
crema c.), 6803
setiferoides, life cycle, 5109
Lepomis (p.1880³) *auratus*, pelvic fins as
 affecting swimming in, 6955
 Leporidae (Mammalia), p.1882³
Lepotrema (p.1869³) *clavatum* (*Lepocrea-*
dium c.), 6803
 Leprosaria, in medieval Pomerania, re-
 view, 17379
 Leprosy. (See also *Mycobacterium leprae*.)
 abortive or stationary, statistics in
 Basutoland, 4667
 age distr. curves, significance, 4657
 bacteriology, review, 17306
 bone changes, circulatory effects and,
 4232
 childhood, investigation center for
 study, 558
 chrome acid-fast bacterial strain caus-
 ing, 9963
 climate and, 14391
 complement fixation in, by W.K.K.
 antigen, 8126
 control, advances in, 13634
 in Brazil, 13634
 in Ceylon, Nigeria compared, 4661
 diet survey of families with, 10948
 Duval's chromogenic *Mycobacterium*
 from, filtration trials, 8360

- epidemiology and control, in Africa, 15320
fever therapy as affecting blood in, 257
field studies, value, 4653
Gaehgens pallida reaction in sera, 8256
hereditary predisposition to, 10021
history and epidemiology, in Queens-
land, 17368
human and rat forms, 6195
immuno-therapy, 6195
incidence, in Australia, 17367
in New Caledonia, 17368
lupus vulgaris in, 11640
murine, immunological reactions in,
8935
nodules, tissue culture, 17318
origin and spread in Panama, 17365
phenol red therapy, 9940
procaine affecting, 4166
rat, in bandicoot, 17372
physical and chemical properties of
bacilli, 15258
ultraviolet irradiation effects on
bacilli, 17380
Reenstierna's antiserum for, case re-
ports, 13399
risk of household exposure, statistics,
4653
seasonal variations in, 17373
separation of bacilli from lesions, 15258
serodiagnosis, by complement fixation,
antigen fortification in, 4450
new method, 6053
by flocculation reaction (new), 4449
by Lleras complement fixation test,
8254
serological relations, 9830
survey, Solomon Islands, 10019
types, complement fixation as showing,
6195
vits. B and C as affecting, 9626, 9627
Leptotene as source of vit. A, 16509
Leptitidae (Mammalia), p.1882¹
Leptinotarsa (p.1876²) decemlineata, disper-
sion in Europe, control by pre-
dators, 12188
population counting methods, 8967
Leptocardi, p.1878¹
Leptocarpus (p.1879²), spp. descr. of
larval forms, 18040
† Leptocarpus (p.1881²), skeletal features,
and occurrence in Cretaceous of
Montana, 18052
Leptochirus (p.1874²) pilosus, tube con-
struction and breeding habits, 10795
Leptocoris (p.1875²) trivittatus, life hist.
and control, 1488
Leptodactylus ocellatus, Zellertella in, 12277
LEPTODAMPUS (Chilop.) (p.1873⁴)
lamprus, 5123
Leptodictya (p.1875²), n. spp., 12377
Leptodontium (p.1863²), n. combs. and
n. sp., 4748
Leptodotiorella (p.1862²), n. spp., 17500
Leptofulus (p.1873²), n. subsp. and races,
16014
Leptolamprologus (p.1880²), synonymy,
16055
Leptophyllus hollandicus, psittacosis in, 954
Leptomedusae, nematocysts, England, 3278
Leptomeninges. (See Meninges.)
Leptomys (p.1883¹) signatus, n. sp., 7055
Leptomys gracilis, seasonal occurrence
off Plymouth, 1850
Leptonidae (Mollusca), p.1872⁴
Leptopharsa (p.1875²), n. spp., 12377
Leptophenix (p.1864⁴), n. comb., 15488
Leptopisa (p.1874⁴), tax., 1616
Leptoplanus (p.1869²) vesiculata, 10541
Leptoplinidae (Platyhelminthes), p.1869²
Leptosyllus (p.1873²), n. spp. and keys,
12331
Leptorhynchoides (p.1870⁴) thecatus, life
cycle, 10549
Leptospermum lanigerum, Phyllachora on,
8407
Leptosphaeria (p.1861³), n. sp., 15453
pratensis, ascigerous stage of Stagono-
spora (Phoma) meliloti, 3109
on sweet clover seed, 17750
scitula, on Galium, 8408
Leptospira (p.1861³), antigens, properties,
6030
demonstration by fluorescent dyes,
11575
immunological aspects of infections
by, 17128
from kidney of bat, comparison to
L. icterohaemorrhagiae, 6183
serological differentiation in, 6086
serological reactions, pH of media
as affecting, 923
strains from Weil's disease and
rats compared, 11641
Leptospira (continued)
bataviae, infection in cats, 1011
canicola. (See also Spirochaeta c.)
dogs infected by, age as affecting,
15380
human infection by, 15819
incidence in dogs, 15319
hebdomadis. (See also Seven day fever.)
serologically related to L. sejeje,
17292
icterohaemorrhagiae. (See also Spiro-
chaeta i.; S. icterogenes; Weil's
disease.)
dogs infected by, incidence, 15380
effect on chick embryo liver, 17294
fatal infection in fish merchant, 8229
incidence in sewer rats, 6200
in U.S.A., 15319
rats as reservoirs, 8302
strains from Weil's disease and rats
identified as, 11641
white rats as reservoirs, 15328
icteroides. (See Yellow fever.)
javanica, infection in cats, 1011
sejeje, human infection and serological
relations, 17292
meningitis and paralysis of lower
extremities associated, 13608
pathogenicity and animal inocula-
tions, 13610
Leptospirosis. (See also Spirochaetosis.)
of cats, 1011
in dogs, incidence of forms, 15380
in Queensland, 994
in rats, incidence and sero-relations,
1001
Leptosporella (p.1861³) macrotheca, 8407
Leptostromaceae (Fungi), p.1862⁴
Leptothrix (p.1878²), tax., 6922, 18031
Leptothrix crassa, thick-sheathed form,
15408
Leptothrix (p.1872²) dryfese (PI), 16010
Leptotilia (p.1881²), food habits, 9064
Leptotrichia, oral forms, 17446
buccalis, from mouth, 17446
Leptotyphlopidae (Reptilia), p.1880⁴
Leptotyphlops (p.1880⁴), new spp., 18055
Lepus (p.1882²). (See also Hare; Rabbit.)
americanus, population fluctuation, fac-
tors in, 14435
macfarlandi, parasitological and disease
survey in Alaska, 4681
phaeonotus, parasites, 5240
capensis, new tapeworm from, 15987
Leppronia (p.1875⁴), n. sp., 6916
Lernaeopodidae (Crustacea), p.1873³
Lernaeopodoida (Crustacea), p.1873³
Leskeaceae (Bryophyta), p.1863⁴
Lespedeza, fertilizer for, varietal differ-
ences, 13838
P utilization, limestone as affecting,
10175
Lespedeza spp., bacterial wilt, new, 3169
control of dodder in, 10366
sericea, tannin content, in various organs
and at various seasons, 6458
Lesquerella (p.1865²), chromosome no. and
n. sp., 13760
Lestomyia (p.1877²), n. sp. (N), 5150
Lethal genes. (See Genes, lethal.)
LETTOWIANTRUS (Dicot.) (p.1865²)
15483
Lettuce, downy mildew (Bremia lactucae),
pathogenicity, light as affecting,
17822
sporulation, light as affecting, 4995
in greenhouses, soil pH for, 13883
growth of seedlings, radiation as affect-
ing, 10320
Iceberg, culture and variety trials,
N. Y., 15602
P deficiency as affecting, 17677
polyploidy, induced by colchicine, 12538
potassium deficiency as affecting, 17642
seed disinfection, 1475
seed germination, storage and temp. and
light as affecting, 1369
S compounds as affecting, 17696
seed viability, storage temp. as affecting,
13917
yellows, leafhopper vector, control,
12199
Leucemia. (See also Leucocytes; Leuco-
cytosis; Leucosis.)
action of radioactive P in, 16321
aleucemic, findings, symptoms, 13259
aleucemic lymphosarcoma cell,
hematopoiesis, 5837
anemia in, causes, 16427
autolysis of leucocytes and lymphocytes,
250
blastoma and, 4255
blood oxalic acid in, 11327
bovine, etiology and general account,
6228
cells, muscine, cultivation in vitro, 4241
classification, 4251
diagnosis by splenic and bone marrow
punctures, 11318
isoagglutinin titers, 7877
lymphatic, cozymase in blood and urine,
5841
leucemic lymphoblastoma and, calf,
608
lymphoid, in pig, 15368
metabolism of blood cells vs. tumors,
9617
mixed, myeloid and lymphatic, case,
11314
monocytic, clin.-hematologic, 4253
in mice, relation to similar neoplasms
in man, 2356
produced by 1:2-benzpyrene, mice,
580
supravital staining and, 7873
myelogenous, leucopenic, histo-path.,
643
P metabolism in, 11332
relation to panmyelophthisis, etiology,
2398
myeloid, produced by 1:2-benzpyrene,
mice, 580
in newborn, hist.-path., 7881
occurrence of achlorhydria, 11310
phagocytosis, sedimentation rate and
bacterial occurrence in, 13255
preservation of cells in frozen state,
mice, 573
vs. reaction to As, quinine, and
prontosil, 13254
and related conditions, 9620
relation to trauma, 11336
serum phosphatase conc. in, 11274
tissue autolysis and, vs. carcinoma,
9586
transmission by cell-free extract, mice,
2392
urine extract from, effect on guinea pigs,
13260
vit. C in blood in, 12857
Leucicthol, absorption, 16398
Leucine, technical, fusel oil formed by
yeast fermentation, 10062
Leuciscus leuciscus, in inflammation of swim
bladder of fish, 623
Leucoblasts. (See under Leucocytes.)
LEUCOCHLORIDOMORPHA (Platyh.)
(p.1870²), new spp., 1591
Leucocoryne (p.1865⁴) izioides, macrosporo-
genesis in, 17554
note, 15501
Leucocytes. (See also Blood cells; Eosino-
philia; Hematopoiesis; Leucemia;
Leucopenia; Leucocytosis; Leucosis;
Phagocytes; Phagocytosis.)
absence, avirulent pneumococci in,
pathogenicity, 17313
bacteriophage absorption by, 6159
basophilic aggregation test, in cement
workers, 5873
changes in leucocytosis, exptl., 9621
chemotactic effect of saliva on, 16403
chemotaxis to streptococci, antibodies
as affecting, 13407
count in aleucemic lymphosarcoma cell
leucemia, 5837
in cardiac infarction, with rupture,
7723
in chronic rheumatic heart disease,
13119
differential and absolute, 15005
in expt'l lobar pneumonia, dog, 5821
in healthy children, 16822
as influenced by:
allergic shock from pollen, 13509
chemotherapy, 17243
drugs, 11213
glycogen admin., 7750
radium emanations, 3574
in sensitized rabbits, 2427
in tuberculous patients under basal
and active conditions, 16960
value in management of pulmonary
tuberculosis, 10901
decreased, effect on wound healing,
16900
derivation in birds and mammals, 5882
distr. in circulating blood, organismal
differentials and, 9681
emulsion, Takata reaction, 14936
eosinophiles, count in asthma, 13256
in benzol poisoning, 11233
fixation method, 9712
histamine in, 14493
immunization with, antibodies to Hb
not formed by, 8158
indophenol-reducing capacity, guinea
pig, 3640
in inflammation, review, 9606

- Leucocytes (continued)**
 as influenced by:
Eberthella typhosa filtrate, . . . 15135
 pH, . . . 5818
 sulfanilamide, . . . 15190
 leucoblasts, mitotic in infectious lympho-
 cytosis, . . . 14926
 lymphocytes. (See *Lymphocytes*.)
 macrophages, in acute inflammation, . . .
 lymphocytes and, . . . 14916
 metabolism in Ringer-phosphate and in
 serum, . . . 16421
 migration, in inflammation, . . . 2383
 in uterine and vaginal epithelium, sig-
 nificance, rat, . . . 3966
 migration and mobilization, factors af-
 fecting, . . . 14505
 monocyte/lymphocyte ratio, in tubercu-
 losis, . . . 4236
 monocytes, pseudopodia, . . . 2428
 mononuclear, in blood, in pneumococcus
 infection, guinea pigs, . . . 13236
 in infectious mononucleosis, . . . 11333
 rôle in trypanosome resistance, 9911
 myeloblasts, Auer bodies in leucopenic
 leucemia, . . . 643
 metabolism, and sensitivity to O₂
 tension, . . . 12643
 myelogram, sternal puncture and, 4244
 negative chemotropism, rabbits, . . . 5819
 neutrophils, polylobation, factors in,
 fetus, . . . 246
 nonfilamented, in acute infections, . . .
 in pernicious anemia, . . . 16889
 phagocytosis by, protosol and sulfanila-
 mide as affecting, . . . 6154
 primitive, in leucemias, metabolism, . . .
 relation to spindle cells of cornea, . . . 4363
 resistance to autolysis in diseases, 250
 sedimentation rate, . . . 15005
 transfusion, basis for, . . . 3635
Leucocythemia. (See *Leucemia*.)
Leucocytosis. (See also *Leucemia*; *Leuco-*
cytes; *Leucosis*.)
 in inflammation, rabbits, . . . 9607
 in nephritis, occurrence, . . . 11319
 nervous stimulus to, . . . 11074
 neutrophilic, in spinal fluid in cerebral
 lesions, . . . 11331
 after parenteral liver extract, . . . 12643
 stages, histamin and, . . . 9621
Leucocytotaxis (p.1868*), in birds, vector,
 diagnosis, and control, . . . 6733
 incidence, wild birds, . . . 17901
coccyzus, from *Coccyzus*, . . . 3257
sakharoffi, from *Corvus*, . . . 3257
smithi, macrogametes, in turkey, 10494
 in turkeys, . . . 12273
Leucogaster (p.1862*) *nudus*, descriptive
 notes, . . . 2812
Leuconostoe mesenteroides. (See also *Beta-*
coccus arabinosaceus.)
 growth factors for, . . . 17470
 peptidase, . . . 2749
Leucopenia, in aleuemic leucemia, 13259
 allergic shock from pollen inducing, . . .
 13509
 avirulent pneumococci pathogenic in, . . .
 17313
 blood glycoprotein injection causing, . . . 550
 in Hodgkin's disease, . . . 14909
Leucophaea maderas, as interm. host of
Protospiroa, . . . 15955
Leucoplakia, cervical cancer and, . . . 2869
Leucoplasts. (See *Plastids*.)
Leucopertine. (See under *Pigments*.)
Leucosis. (See also *Erythroleucosis*.)
 ascorbic acid requirements and, . . . 7876
 avian, agent reactivated after inactiva-
 tion by oxidation, . . . 2391
 etiology, . . . 6223
 immunization to, . . . 2604
 transmission, . . . 11742
 types, symptoms and pathology, . . . 11741
 bovine, etiology and general account, . . .
 6228
 neurolymphomatosis gallinarum as
 form, . . . 8325
 thrombocyte fragility in, . . . 14444
Leucostates (p.1882*), breeding in Oregon, . . .
 5207
 Leucotaxine, histamine and, . . . 4234
 in inflammation, review, . . . 9666
 physiological effects, . . . 624
 rôle in inflammation, 2383, 5816, 5817
Leucothoe (p.1866*), critical notes, . . . 3307
 synopsis, . . . 15507
Leukemia. (See *Leucemia*.)
 Leukoencephaloclerosis, Schilder's dis-
 ease, clin-path., . . . 14922
- Leuresthes** (p.1879*) *tenius*, embryonic and
 larval stages, . . . 18042
LEVIDEA (Homopt.) (p.1875*), . . . 1631
 Levulosans. (See *Fructosans*.)
 Levulose. (See *Fructose*.)
Liabum (p.1867*), n. sp., . . . 6437
Liagora (p.1860*), spp., of Japan, mono-
 graph, . . . 5380
 Lianas, of Kansas, list, . . . 1150
Liardetia (p.1872*), n. sp., . . . 5114
 Lias, Liassic. (See *Jurassic*, p.1893*)
Libellula (p.1875*) *gagel*, . . . 12402
Libocedrus (p.1864*), in Argentina, 15484
 of Italy, (N), . . . 13721
decurrens, *Arthrobotryum* on, . . . 17489
Liburnia (p.1875*), taxonomic status, . . .
 18014
Libythea carinata, flight record, . . . 3359
Licania (p.1865*), n. sp., . . . 2865
 Lice (biting and sucking). (See also under
 genera, e.g., *Pediculus*.)
 of Australian birds and mammals, 6706
 history of knowledge, . . . 1520
 relapsing fever transmission by mecha-
 nism, . . . 4581
Rickettsia from, inoculations to man and
 animals negative, . . . 15220
Rickettsia prowazeki from, properties, . . .
 1003
Rickettsia rocha-limae infecting, . . . 15248
 as vectors. (See also *Insects*, as vectors.)
 of relapsing fever, . . . 15314
 of *Rickettsia*-induced fever in man, . . .
 13562, 13563
 Lichen, acids, review, . . . 14441
 cephalodia, taxonomic and phylogenetic
 significance, *Stereocaulon*, . . . 6368
 communities on Lunz sandstone of Cen-
 tral Europe, . . . 6367
 crustose, as food of snail, . . . 4742
 distr., Germany, . . . 1092
 ecology, . . . 3504
 as food plants, . . . 8516
 of Formosa, . . . 1091
 of France, . . . 1088
 genera, notes on, . . . 1089
 habitat in Oregon, . . . 4745
 of Massachusetts, taxonomy, . . . 4746
 on mosaics, Italy, . . . 13741
 new to Auvergne, . . . 1087
 photosynthesis, light and temp. as affect-
 ing, . . . 12088
 phytogeography, . . . 8414
 symbiosis, . . . 1086
Lichenophanes (p.1876*), n. sp. from
 tropical Africa, . . . 3328
Lichtheimia (p.1861*), new species, 6354
 Licking disease, of ruminants, etiology, . . .
 17389
 Licks, animal, biochemical study, and
 nutritional effects, . . . 7038
Licuala (p.1864*), n. spp., . . . 11864
LIENARDELLA (Pisces) (p.1880*) *fasci-*
ata, n. comb., . . . 5155
 Liesegang rings, formation, in blood
 plasma, . . . 1885
 from uric acid, . . . 12643, 13017
 Life, cycle, in insects, brood and genera-
 tion defined, . . . 1436
 duration. (See *Longevity*.)
 nature, . . . 1, 1663
 mechanism vs. vitalism, 1665, 10675
 and problems, book, . . . 10677
 origin and nature, books, . . . 3406, 7090
 viruses in relation to, . . . 4587
 Life forms. (See also *Communities*; *Vege-*
tation.)
 of Japan-Hondo, . . . 3505
 spectra of Eucalypt, sub-tropical and
 sub-antarctic rain forests, 12586
 Life zones. (See also *Phytogeography*;
Zoogeography.)
 Merriam's, of N. A., . . . 5366
 of Washington State, . . . 1158
 Ligament(s), cuneo-metatarsal interosseal,
 anatomy, . . . 707
 fascia grafts in tendon defects, . . . 712
 nuchae, elastin formation from, . . . 4362
 Ligatures, sterilized, aerobic bacillus iso-
 lated from, . . . 11800
 Light. (See also *Adaptation*; *Irradiation*;
Photodynamic action; *Photoperiod-*
ism; *Photosynthesis*; *phototropism*
under Tropisms; *Radiations*; *Spect-*
rum; *Infra-red*; *Ultraviolet*.)
 absorption, by lake waters, . . . 7224
 in natural waters, . . . 1820
 activation of egg laying in pheasants, . . .
 5416
 aggregations of tadpoles in, chemicals
 as affecting, . . . 7615
 alternating periods, effect on growth of
Sclerotinia, . . . 6594
- Light (continued)**
 effect on:
 accumulation and exit of ammonia,
Valonia, kinetics, 10309, 10310
 ascorbic acid, in cowpea plants 3089
 in oranges, . . . 13881
 breeding behavior, raccoons, . . . 3968
 . . . 5664
 capon comb response to directly ap-
 plied androgen, . . . 12643
 cells of pituitary gland, toad, . . . 15092
 chlorophyll formation in cambium
 cells, . . . 1372
 color of lizards, . . . 7607
 deficiency and metabolism diseases,
 . . . 11342
 dormancy, grass seed, . . . 6587
 dorsiventrality, fern prothallia, 17699
 egg production, poultry, . . . 11504
 turkey, . . . 11514
 electric potential, *Chara*, . . . 4952
 estrus cycle, . . . 14693
 fermentation and respiration, plant
 tissues, . . . 1389
 flower structure, tomato, . . . 6514
 gonad development, rats, . . . 12960
 heteroauxin activity, nodulation in
 radish seedlings, . . . 12067
 hormone production in leaves, *Falsia*,
 . . . 15721
 tomato, . . . 17682
 H₂O₂ formation, in organic extracts, . . .
 6801
 leaf fall, *Platanus*, . . . 4942
 malaria periodicity, canary, . . . 10510
 metabolism, of photoreceptors, *Anolis*,
 . . . 14701
 plant tissue, . . . 6599
 N metabolism, in plants, . . . 1896
 permeability of plant membranes,
Eloidea, . . . 13991
 P and N absorption, by algae, 15698
 photosynthesis, . . . 4934
 lichens, . . . 12083
 as limiting factor, . . . 1880
 rôle, . . . 1381
 photoxan formation, in plants, . . . 6611
 pituitary activity, rat, . . . 9298
 polarization of *Cystoseira* eggs, 1386
 potassium absorption, corn, . . . 13976
 protein synthesis, leaves, . . . 8591
 protochlorophyll, in pumpkin seed,
 . . . 12086
 respiration, plants, . . . 14009, 14011
 rice, growth and yield, . . . 8453
 ripening of fruits in storage, . . . 3009
 root growth, apple, . . . 17715
Lemna, . . . 3065, 8575
 root pressure, . . . 4939
 seed germination, *Festuca* spp., 8467
 mistletoe, . . . 12074
 rockgarden plants, . . . 6586
 seed storage and germination, lettuce,
 . . . 1369
 sex cycle, greenfinch, . . . 11111
 sparrow, . . . 425, 5674
 toad, . . . 3956
 skin, . . . 3578
 spermatogenesis, . . . 5665, 12622
 . . . 12630, 18081
 sporulation, *Fusarium*, . . . 10321
 substances related to ergosterol,
 . . . 11022
 SO₂ injury to plants, . . . 6616
 toxicity of F., . . . 9170
 tuber formation, potatoes, . . . 14004
 union of gametes, algae, . . . 6600
 viability, gladiolus pollen, . . . 17695
 vit. K, . . . 9245
 water absorption, orchid roots, 12062
 water storage and pigment formation,
 plantain, . . . 4947
 inactivation of auxin by, . . . 1358
 intensity, effect on:
 brightness preferences resulting
 from acquired size prefer-
 ence, rat, . . . 2188
 development of bean rust, . . . 5004
 distal retinal pigment, *Leander*, 442
 melanophore response, *Nocomis*, 430
 photodynamic hemolysis, . . . 10885
 photosynthesis, apple leaves, 17711
 rate, *Fucus*, . . . 1840
 plankton migrations, . . . 7321
 under forest cover, . . . 8523
 measurement. (See *Light*, *measure-*
ment.)
 melanophore response and, fish, 430
 patterns, reaction of *Maegeria* to, 432
 of plant associations, Denmark, 5382
 reading under, effect on B. M. R. and
 pulse rate, . . . 11134
 relation to migration of *Cyclops*,
 . . . 12616

SUBJECT INDEX

Light-*Linum*

- Light (continued)*
intensity (continued)
relation (continued)
to photoperiodism, . . . 4928, 12080
to rhythmic activity in toad, 3497
intermittent, use in heating and lighting greenhouses, . . . 1225
long-wave visible, sensitization of bacteria to, . . . 15420
measurement. (See also *Photometers*; *Spectrophotometry*.)
antibody formation determined by, . . . 6109
in beech forest, . . . 3489
in inland lakes, methods, . . . 10760
instruments for, comparison, . . . 8986
photographic method, . . . 1821
melanophore stimulating substance liberated in blood by, . . . 12643
monochromatic, effect on growth, lettuce seedlings, . . . 10320
relation to photoperiodism, . . . 1379
penetration in forests and park-like areas, . . . 10763
in lake, methods of measurement, 140
of small bodies of water, . . . 12613
of western N. Atlantic, effect on migration of deep water plankton, . . . 9041
of Wisconsin lakes, . . . 7234, 8991
perception. (See *Vision*.)
pigmentation and, man, . . . 7280
polarized, in study of peripheral nerves in avitaminosis B₁₂, . . . 11343
quanta relations, in photosynthesis, *Eloidea*, . . . 12087
receptors. (See *Eye*.)
red, absorption by CO-saturated, oxidized and reduced blood, . . . 7361
reducing action on skin, . . . 5469
relation to cracking of fruit, apple, . . . 3007
to phototropism, *Helianthus*, . . . 8615
requirements of marine phytoplankton in northern waters, . . . 14398
response of amoeba to, . . . 7605
of earthworm to, nervous system function in, . . . 11128
of *Ephestia* to, . . . 3989
scattering by suspensions, . . . 16337
sensitivity, of organisms to, quantum relations, . . . 8868
salts and pH as affecting, *Peranema*, . . . 12653
to sulfanilamide, allergic nature, . . . 11585
testing, instruments and techniques, . . . 16393, 16394
sensitization. (See *Photosensitization*.)
short-wave, effect on animals, review, . . . 3485
submarine illumination, evaluation, . . . 10799
sulfhydryl reduction by, . . . 9104
sun, cancer of dorsum of hand and, . . . 9597
carcinogenic action, . . . 4210, 4216
dental caries and, . . . 15299
distr. on alpine slopes, . . . 16235
effect on:
dairy cattle, . . . 775
N transformations in soil, . . . 17436
sugar cane, . . . 1187
Trichomonas vaginalis in culture, . . . 12274
vit. C in milk, . . . 13371
as limnologic factor in Lapland, 3202
use in forcing ornamentals, . . . 1225
wave lengths, effect on growth and reproduction of mold, . . . 15442
interference between bacteria and erythrocytes, pathogenicity relations, . . . 6189
response of house fly to, . . . 6702
Lightning, injury, to cotton, . . . 1481
to grapes, England, . . . 8537
strikes, incidence, subterranean radiation and, . . . 11389
Ligia baudiniana reactions to cations, 5428
Lignification. (See also *Cell wall*; *Lignin*; *Wood*.)
technic for differentiation, . . . 11913
time in monocoat fiber, . . . 10169
Lignin. (See also *Cell wall*; *Lignification*; *Wood*.)
annual review, . . . 14440
in apple wood and bark, factors affecting, . . . 1267
chemistry and color reactions, . . . 6618
decomposition in soils, review, . . . 1044
in forage crops, effect on feed value, . . . 15534
Friesen reaction for flowers, . . . 10170
in grasses, relation to feed value, 17595
in pine needles, changes during aging, . . . 17738
separation from cellulose, method for use with fibers, . . . 6467
structure, x-ray analysis, . . . 3103
utilization by *Polyporus*, . . . 3139
Ligule intestinalis, plerocercoid, development in favorable host, . . . 6739
Ligusticum (p.1866²), n. sp., . . . 1158
Lilac. (See *Syringia*.)
Liliaceae (Monocotyledones), p.1865¹
Liliales (Monocotyledones), p.1864⁴
Liliiflorae (Monocotyledones), p.1864⁴
Lilium (p.1865³). (See also *Lily*.)
injury by *Neolasioptera hibisci*, 12194
longiflorum, disease in relation to bulb mite, . . . 10412
dormancy of bulbs, O as affecting, . . . 17697
effect of high temperature on metaphase pairing, . . . 1699
mosaic, separation of viruses in, 3169
philippinense, macrosporangiosis, 7104
tigrinum, microsporangiosis in diploids and triploids, . . . 7093
umbellatum, structure of pachytene chromosomes, . . . 14346
Lily (ies). (See also *Lilium*.)
B distr. in organs, . . . 4955
mosaic, cucumber virus 1 from, . . . 1434
virus diseases, host range, . . . 4977
Limacidae (Mollusca), p.1872³
Limacina (p.1872²) *retroversa*, populations, in Gulf of Maine, . . . 5392
reproductive syst. and spermatogenesis, . . . 68222
reversal of sexuality, factors in, . . . 10559
Limacinaidae (Mollusca), p.1872²
Limapontia (p.1872²) *capitata*, larvae, 8746
Limapontidae (Mollusca), p.1872²
Limax. (See also *Slugs*.)
biology, and breeding habits, . . . 14230
Limb(s). (See also *Appendages*; *Digits*; *Foot*; *Hand*; names of bones under *Bone*; *Regeneration*; *Transplantation*.)
anthropometric study in children, 17034
blood content, respiration as affecting, . . . 8646
blood pressure, vasomotor activity and, . . . 9515
bones, measurements, factors affecting, guinea pigs, . . . 9678
relative growth in anthropoid apes, . . . 17021
buds, transplants, innervation, chick, . . . 18331
origin of pigment cells in, . . . 17047
circulation, in diabetes, study, . . . 13101
heat and drugs as affecting, . . . 5722
plethysmographic studies, 7700, 7701
and thermal reflex vasodilation test, . . . 11197
cubitus valgus, in infantile, . . . 652
duplicities, temp. as affecting, *Ambystoma*, . . . 744
fore, cavernous hemangioma, effect on heart size, . . . 5724
extensor muscles, anatomy in early tetrapods, . . . 16955
hind, circulation and vascular vol., dog, . . . 16734
vasomotor regulation, dog, . . . 13125
incidence of skin cancer and, geogr. distr., . . . 13227
nerve regeneration, factors controlling, *Triturus*, axolotl, 657, 658, 11375
pelvic fins, rôle in swimming, . . . 6955
peripheral vascular disease, classification, therapy, . . . 16741
rôle in heat dissipation, turkey, . . . 12643
rudiments, transplants, reversal of prospective-polarity in, *Ambystoma*, . . . 11454
transplants, development and innervation, . . . 8047
Lime. (See also *Calcium*; *Fertilizer*; *Soil*.)
in Bordeaux mixture, leaf hardening in tomato due to, . . . 5002
effect on:
blueberries, . . . 13870
crop plants, . . . 8455
eyes, . . . 14937
growth of conifers, . . . 10243
pastures, Ohio, . . . 2932
soils, Scotland, . . . 15532
weed herbage, . . . 16260
in insecticidal dusts and sprays. (See *Lime-sulphur*.)
Lime(s). (See also *Citrus*.)
root disease (*Sphaerostilbe*), . . . 14033
Limestone, soybeans and, for beef cattle, . . . 13956
Lime sulphur, chemical comp. and mixtures, . . . 3212
reactions with Pb arsenate and wetting agents, . . . 3211
Limnephilidae (Trichoptera), p.1876⁴
Limnocythere (p.1873²), tax., . . . 10569
problematica, transferred to *Gomphocythere*, . . . 10569
Limnodrilus (p.1871⁴), vital stain reduction gradients in asphyxiation, . . . 11467
Limnology. (See also *Ecology*; *Lakes*; *Ponds*; *Water*.)
alpine and polar, review, . . . 12614
classification of small bodies of water of Australian Alps, . . . 10893
concepts and trends in fresh water studies, . . . 12609
fresh water biology, applications, 7222
light absorption in natural waters and algae, . . . 1820
P deficiency in natural waters, CaCO₃ content and, . . . 1240
productivity of natural waters, . . . 5999
of Sweden, survey, . . . 7229
temp. characteristics of fresh waters, . . . 9044
Limnophila (p.1867²), in Papua, . . . 11895
Limnophyes (p.1877⁴), n. sp., . . . 6859
Limonia (p.1877²), n. spp., . . . 14251
Limonium (p.1876⁴) *californicus*, effect of traps on population, . . . 10406
canus, external anatomy, . . . 17995
Limulus, phylogeny, . . . 12338
Linaceae (Dicotyledones), p.1866¹
Linanthus (p.1867²), tax., . . . 2868, 4797B
Lindblom, Alexis Eduard, biography, . . . 10700
Lindera (p.1866²), n. combs. and n. sp., . . . 15486
Lindernia (p.1867²), n. sp., . . . 11895
Lindia (p.1871²), n. spp., . . . 6805, 6807
Lindsaea (p.1863²), n. spp., . . . 1097, 8421
Lindsaea spp. (p.1863²) in Japan, . . . 2813
Linguatula serrata, in goats, Bulgaria, 8695
liver lesions, ruminants and swine, . . . 12260
Linguatulida, p.1874⁴
Linkage. (See also *Crossing-over*.)
in barley, . . . 84, 8940
in *Bombyx mori*, . . . 7157
in *Canna*, . . . 5317
complete, kernel variation and albinism, maize, Lagkit, . . . 7127
of dominant mutations, in 3d chromosome, *Drosophila*, . . . 12555
of factors for twinning, man, . . . 10744
of 50-vestigial glume, maize, . . . 8943
of genes for flower color, *Trifolium*, 5323
groups, *Antirrhinum*, . . . 76
sorghum, . . . 82
hindrance, to gene recombination, 8921
maps, and salivary chromosomes, *Drosophila*, . . . 7112
of naked and caracul, house mouse, . . . 12547
of new lethal gene, rat, . . . 14370
in *Peromyscus maniculatus*, . . . 8946
precision of product formula for estimation, . . . 5302
recent studies, maize, . . . 5331
relationships of 10th chromosome, maize, . . . 7133
of recessive mutations, *Lupinus*, . . . 8942
of self sterility genes with flower color, *Antirrhinum*, . . . 5319
sex, in *Carica papaya*, . . . 5315, 10728
of ectodermal dysplasia, man, . . . 16209
in *Ephestia kuehniella*, . . . 16200
in *Lebistes reticulatus*, . . . 3466
plumage defect, naked, domestic fowl, . . . 1772
tests for, man, . . . 16210
for time of sexual maturity, turkey, . . . 14366
for translocations involving chromosome 8, maize, . . . 8924
in *Tropaeolum majus*, . . . 16189
ultraviolet as affecting, *Drosophila*, . . . 10736, 10737
of zygotic lethal with other genes, maize, . . . 8932
Linnaeus, biography, . . . 27
systema Naturae, I. Regnum Animale, facsimile edition, . . . 14337
Linociera (p.1866²), n. sp., . . . 15508
Linoleic acid, in Danish butterfat, . . . 11501
Linotaeniidae (Myriopoda), p.1873⁴
Linseed cake, HCN removal from, . . . 4403
Linseed oil, drying capacity, maturity of flax seed as affecting, . . . 10198
preservation by esters, . . . 11769
unsaturated acids, oxidation products, . . . 5478
Linum (p.1866²). (See also *Flax*; *Linseed*.)
n. syn., . . . 1158

Linum (continued)

- usitissimum*, tetraploidy, induced by high temperature, 16178
Liolaemus (p.1860²), tax., 5166, 6983, 6984
 6985, 8823, 10635, 16059
Liomys (p.1882⁴), n. subsp., 7042
Lion(s). (See *Felis*.)
Liomyxa, host for *Xenopsylla*, 14279
Liparidae (Pisces), p.1880²
Liparis (p.1880²), spp. descriptive notes, 5151
monacha. (See also *Lymantria monacha*.)
 biol. control, 1504
Liparoceretidae (Mollusca), p.1872⁴
Lipurus (p.1875³), n. sp., 6941
Lipids. (See also *Cerebrosides*; *Fats*; *Fatty acids*; *Lipochromes* under *Pigments*; *Oils*; *Phospholipids*; *Sterols*; *Waxes*; etc.; and specific lipids, e.g., *Cholesterol*, *Lecithin*.)
 adsorbability of antibodies to polysaccharides vs., 13457
 -antigens, in Jensen sarcoma, 2627
 aqueous interfaces, membrane formation at, in tissues, 16302
 of *Blastomyces dermatitidis*, 17324
 in blood. (See under *Blood*.)
 in blood platelets, man, 1963
 of cell nuclei, 16496
 in chloroplasts, 14010
 in *Cysticercus*, 17910
 detn., 9112
 in diet. (See under *Diet*.)
 effect on toxicity of nitro compounds, 14824
 of enteric bacilli, 6325
 in erythrocytes, detn., 14443
 in gallstones, 12905
 in genital tract, sex cycle as affecting, monkey, 12643
 -growth factor, for tubercle bacillus, 6298
 in hypothalamico-hypophyseal adiposity, rat, 12643
 injections of human into rabbits and dogs, lesions caused by, 12819
 in liver, cocaine as affecting, 5594
 in mammary gland, pregnancy and prolactin as affecting, rabbit, 14688
 metabolism, liver extract and vit. D as affecting, in idiopathic steatorrhea, 3739
 after pancreatectomy, duck, 9350
 review, 14440
 in tissues in vitro, factors affecting, 12822
 mixtures, plasmal detn. in, 16340
 nutritive value, 7403
 origin in cells of *Basidiobolus ranarum*, 7107
 -phosphorus detn., 16352
 review, 9201
 rôle in intercellular substance, 10842
 secreted by leaf epidermis, 4957
 secretion of glands in arthropods, 9780
 in spleen, in Niemann-Pick's disease, effect on coagulation, 1958
 in tissues, effect on bacterial intoxication, 13405
 formalin fixation as affecting, 12886
 in transplanted Jensen sarcoma, 4209
 of tubercle bacillus, 902, 2752
 reactions to tuberculo-proteins vs., 2775, 2779, 17444
 301
Lipins. (See *Lipids*.)
Lipocatic, assay by bromsulphalein liver function test, 3750
 fractionation studies, 12643
LIPOCYSTIS (Prot.) (p.1868⁵) polyspora, in fat body, *Panorpa*, 10524
Lipids. (See *Lipids*.)
Liponeura (p.1877²), larvae and pupae, 3338
Liponyssus, as vector of relapsing fever, 17376
 bursa, as possible vector of "Q" fever, 8210
sylviarum, invading houses, 10421
Lipoproteins, prep. and properties, 3696
Lippia (p.1867⁵), n. spp., 2882
adoensis, essential oils of, chemistry, 6553
lanceolata, *Sphaeceloma* on, 14086
Liquid(s). (See *Fluids*.)
Liquidambar (p.1865⁴), n. combs. and n. sp., 15486
Liquid, effect on blood culture media, 9991, 10001
Liriodendron tulipifera, HCN in leaves, 10288
Liriomyza (p.1877²) *solani*, on tomato, bio-nomics and control, 1500
Lisemys punctata, *Eimeria* in, 6762

- Listerella* (p.1861²), dissociation, 4704
 encephalomyelitis or encephalitis associated with, cattle and sheep, 11756
 flagellar antigens of human and animal strains, 4716
 morph., cultural, serological and pathogenic comparison to *Erysipelothrix*, 4704
 serological vs. geographical grouping, 4716
monocytogenes. (See also *Bacterium m.*)
 immunity from, species specificity, 17156
 in mononucleosis, 17310
 serological types, hosts and, 17156
 ovis, nervous disease of sheep due to, 11724
Listerism, advances in, 11692
Listroderes (p.1876²) *obliquus*, biology and control, 6865A
 various insecticides against, expts., 5070
Listrophoridae (Arachnida), p.1874⁴
Listrophoroides (p.1874⁴) bathyergians, from *Bathyergus*, 17983
Listrus (p.1876³) *regalis*, 6868
Lita (p.1877²), resurrected, 16040
Lithiasis. (See *Calculi*.)
Lithium chloride, effect on *Escherichia communior*, 17447
 effect on uric acid metabolism, 512
 treatment, effect on development of embryo, *Amblystoma*, 743
Lithobiidae (Myriopoda), p.1873⁴
Lithobius (p.1873⁴), tax., 6830, 6832
Lithocarpus (p.1865²), n. spp., 1125
Lithocolletis, weight and abundance of, sun vs. shade leaves as food, 5053
Lithoderma (p.1860³) *fatiscens*, review, 11806
Lithodermataceae (Algae), p.1860³
LITHODORA (p.1860³) *lacustris* (Algae), in fresh water, 10105
LITHONEURA (Palaeodictyoptera) (p.1875²) *lameerei* (Ch.), 3372
Lithosia (p.1877²) *deplana*, comparison with *Lymantria monacha*, 10430, 14133
Lithosiinae (Lepidoptera), p.1877²
Lithurgus (p.1878³), n. sp., and keys, 6925
Litsaea, fats from, chemistry, 12045
Litsaea dealbata, *Asterina* on, 8407
 Litter size. (See also *Birth*.)
 increase in pigs, 11478
 in rats during 14 yrs. in captivity, 3988
 vit. E in diet and, 5581
Littoral. (See also *Halophytes*.)
 bottom fauna of fjords, East Greenland, 3491
 colonization of rocky shore by invertebrates, 12577
 ecology of Tasmania, 16268
 intertidal fauna and flora of S. Africa, survey, 9005
 marine animal communities, ecology, 9002
 O₂ consumption, rhythm in relation to tide, 3494
 marshy regions of North Sea coast, soil suction force, 12582
 salt spray, rôle in coastal ecology, 14381
 tidal waters, nocturnal vertical migrations and zonation of *Bathyporeta* spp. in, 10798
Liver. (See also *Bile*; *Bile ducts*; *Gall-bladder*; *Hepatitis*.)
 ablation, blood sugar after, factors affecting, 300
 effect on:
 antitoxin increase, 6100
 oxidation of alcohol, dog, 16470
 prothrombin, 259
 in pig, 11757
 abscess, *Aerobacter leporis* from, rabbit, 17448
 bovine, bacteriology, 1017
 pyrogenic, etiology, 7868
Taenia solium associated with, 1589
 acute yellow atrophy, exptl., 12643
 alcohol metabolism and, 12643
 amino acids in pig, 12800
 antianemic principle, absence in gastric carcinoma, 3768
 antinecrotic substance, use in CCl₄ poisoning, 2285
 atrophy and necrosis without jaundice, 12917
 bile capillaries, acidophil lining, 7981
 bilirubin excretion in hemolytic jaundice and anemia, 11334
 blood sugar regulation by, 362
 cells, cytology, 173, 1733
 2448, 2479, 3454, 4356
 4358, 4580, 5905, 11426

Liver (continued)

- changes, in brain implanted tumors, 16883
 in nutritional edema of children, 2350
 cholesterol, choline as affecting, 489
 choline and betaine in, *Gadus*, 261
 chronic passive congestion, coronary sclerosis and, 11167
 cirrhosis. (See *Cirrhosis*.)
 cirrhotic lesions, *Capillaria ova* in, rat, 1572
 composition, high sugar ingestion as affecting, rat, 9193
 conjugated glucuronic acids formed in, 12782
 creatine-creatinine metabolism and, 345
 in culture media, 15279
 cysticerci in, elk, 5096
 damage, due to CCl₄, 2108, 2111
 protection by xanthine, rat, 3749
 due to chloroform, protection by xanthine, 12643
 susceptibility to, foodstuff as affecting, 9255
 effect on action of barbiturates, 3745
 on arginase action of organs and blood, rabbit, 12668
 progress, stool and urine urobilinogen content as criterion, 12728
 prothrombin and hippuric acid detns. as indicators, 11040
 degeneration, cholesterol partition study, 16909
 disease, alcohol tolerance test in, 3747
 blood cholesterol and splenic hormone in, 4254
 blood phosphatase value in, 12900
 blood polypeptides in, 16411
 capillary filtration in, 2281
 effect on cholic acid elimination, 9258
 kidney function in, 13015
 special, 2097
 Takata reaction, value, 1969
 treatment, 5839, 9269
 diseases and disorders, 2091
 disorders, dark-adaptation of eye and, 2074
 ducts, foreign body in, producing jaundice and internal biliary fistula, 12879
 dystrophia after cod liver oil feeding, pigs, 2707
 effect on:
 blood phosphatase, 10858
 estrogenic hormones, 381
 proteinemia, 2393
 electrical potential, tympanic stim., as affecting, rabbit, 451
 electrolytes, in K-depleted rats, 14745
 enlargement, causes, 2096
 enzymes, arginase, As and Pb as affecting, rat, 3558
 distr. between protoplasm and cell-nucleus, 12872
 protein as affecting, rat, 12896
 in avitaminosis A and B, 11347
 catalase prepared from, 184
 cathepsin specificity, 3560
 esterase, oxidation and reduction as affecting, 12710
 lipase, distr. between protoplasm and cell-nucleus, 12872
 mutase, 12816
 phosphatases, acid and alkaline, separation and activation, 7276
 uricase, dogs, 2102
 excretion, of fluorescent dyes, frog, rat, 4351
 extracellular and Cl space, equality, rat, 11039
 extract, in acne vulgaris, "S" factor, 14947
 amino N in, decrease, 5825
 antianemic activity, bioassay, 4149
 anti-pernicious-anemia factor, *Bothrioccephalus* as affecting, 2390
 in fetal, 11335
 cell-free, disappearance of amino-N from, 7260
 charcoal adsorbate, prep. and properties, 648
 effect on:
 blood lipids, 12752
 blood picture of mother and newborn, rat, 10891
 hematopoiesis, chick embryos, 646
 idiopathic steatorrhea, 3739
 induced typhoid anemia, rabbits, 5828
 leucocyte formation, 11213
 laevulosemia, child, 9578
 macrocytic anemia of intestinal structures, 7871

SUBJECT INDEX

Liver-Locomotion

Liver (continued)

- extract (continued)
- effect on (continued)
- pernicious anemia,5843
- respiration, yeast,14019
- sprue,11344, 11346
- glutathione detn. in,16338
- growth promoting factor in,16515
- intestinal worms as affecting,14925
- leucocytosis after adm., 12643, 13251
- plasmosin, gels and fibers formed by,173
- use in hepatic insufficiency,14580
- in idiopathic ulcerative colitis,12878
- vit. B factors in,7478
- fat, glycogen and protein during pregnancy, mice,4349
- as influenced by:
- ant. pituitary extract,3797
- exercise, rat,7522
- fasting, rat,302
- fatty, cirrhosis and histopath.,7524
- dietary prevention,10988
- infiltration due to noxious agents, rat,14579
- as influenced by:
- choline-low diet, rat,12817
- high fat diet and supplements, rat,3700
- vit. B₆ deficiency, rat,9227
- in vit. C deficiency, guinea pig, 12858
- fatty acids, ethyldibromostearate as affecting,5603
- in fat-defining disease, rat,7447
- feeding, effect on:
- development of tar-induced tumors,2361
- liver cancer, rats,4214
- polycythemia, dog,14802
- fetal implants, effect on uterus,9429
- function, amino acid metabolism and,12890
- detoxicating, organ cell constituents as affecting,16569
- in Eck-fistula, dogs,358
- in hyperthyroidism, detn. by hippuric acid test,9248
- as influenced by:
- cobra venom,12643
- gum acacia, dog,16448
- vit. A overdosage,16560
- labyrinthine control,1451
- in rheumatoid arthritis,11038
- tests and amino acid metabolism,3757
- by blood cholate detn.,3758
- bromsulphalein, lipocatic assay by,3750
- discussion,2093
- in diseases, of skin,5902
- hippuric acid synthesis as,7514
- glucose, after adrenal and pituitary ablation, insulin and glycine as affecting,7338
- glutathione, insulin hypersensitivity and,9334
- pituitary extracts as affecting, 14617
- glycogen, enzymatic breakdown in extracts,186
- as influenced by:
- adrenal cortex extract, hypophysectomized rats,12813
- bile salts,5599
- cholic acid and creatine,9198
- cocoa and theobromin,7397
- copper,11256
- feeding amino acids to fasting rats,5545
- glucose intravenously,16491
- high sugar diet,10983
- hunger and phlorizin, rabbits,7428
- insulin,5600
- pituitary and, frog,12963
- low atm. pressure and adrenalectomy, rat,10903
- pituitary extracts and diabetic urine,11064, 11065
- sex hormones, ferret,12952
- thyroid and estrogens, rat,14653
- vit. C, guinea pig,7488
- synthesis, role of glucose-1-phosphate in,14448
- glycogenolysis, as influenced by bile salts,5599
- by insulin,5600
- grafts, effect on antitoxin increase,8100
- hematopoietic substance in,3746
- Hb production factors in,9267
- hepatocuprein in,5509
- hyperplasia, in avian malaria, splenic infarcts and,17899

Liver (continued)

- implants, inductive capacity in gastrula, Triton,748
- inactivation of estrone by, rat,14618
- as influenced by:
- anesthetics,508
- atabrine,7754
- atophan, man,16771
- diet,12896
- diethylstilboestrol,11232, 16607
- glycols,9552
- inanition, Bufo,2002
- insulin,7518
- isopropyl ether,7923
- lymphogranuloma inguinale,17334
- mineral oil,16886
- S in diet, rat,16456, 16457, 16458
- vit. A excess, rat,12836
- vit. B deficiency,16514
- injection by contraction of gall bladder,7500
- insufficiency,3744
- in chronic colitis,2092
- and protein equilibrium during sup-puration,16554
- treatment with liver extracts, 14580
- lactoflavin in,12848
- lipids, as influenced by:
- cocaine feeding,5594
- formalin fixation,12886
- pancreatic duct ligation,12643
- lipid and glycerides, passage of fatty acids of food into,7505
- lobule and cell, postnatal growth, 16996
- metabolism, in brel,12816
- as influenced by:
- barbiturates, rat,13189
- choline,7448
- intermediary metabolites and salts,5529
- phloridzin,16485
- thyroxamine,9388
- uric acid,13147
- review,2001
- necrosis after burns, lesions of yellow fever and,9250
- nitrogenous bases, choline and,4248
- oils, (See also *Cod liver oil*)
- oxidation of amino acids by, thyroid as affecting,11060
- parasites and lesions, ruminants and swine,12260
- path., clinical,2093
- in pellagra, hematopoietic vs. antipellagic factors,11348
- perfusion, glycemia modifications during,14573
- hyperglycemia after low O₂ supply,14591
- minute-volume uptake and output of substances in,3767
- sugar and K output during, turtle,361
- phosphate, exchange with blood, fructose as affecting,10913
- phosphatid, during lipolytic action of choline, dog,5587
- phospholipid oxidation by, vanadium as affecting,5446
- phospholipid and cystine oxidation by protein, metals as affecting, 7503
- physiology, review,7244
- pigment, origin and localization,14584, 14585
- during starvation, *Rana*,4370
- potassium deposition, with glycogen and PO₄, rat,7508
- during muscle activity,14743
- potassium movements and,12643
- protein, storage, rat,9264
- synthesis by, review,294
- proteolysis, oxidation and reduction products of hexoses as affecting,9091
- O₂ tension as affecting,9093
- prothrombin formation in,16441
- regeneration, after hypophysectomy, rats,3819
- hypophysectomy as affecting, rat,3755
- role in alcohol oxidation,12643
- antirachitic action of vit. D, rat, 7491
- in blood coagulation,11309
- in plasma loss in shock,16417
- in venous thrombosis, in pancreatic disease,16880
- in water distr. in body,348
- secretion, of bile as influenced by atophan, dog,14856
- by hyperglycemia, dog,14576
- studies,9268
- sinusoids, cells lining, origin in cat and rat,15061
- sulphydryl oxidation by, Ti as affecting,5477

Liver (continued)

- therapy in atrophic gastritis, pernicious anemia and,7882
- in pernicious anemia, 637, 641, 2394
- tissue, carbohydrate metabolism, 12816
- supravital staining,11432
- tumor, associated with *Fasciola* and *Dicrocoelium*,2362
- cathepsin content, rat,12286
- in child,4203
- in dog,16376
- histopath.,14893
- hyperpolypeptidemia in,7344
- as influenced by:
- liver feeding,4214
- ox bile, mice,16885
- vit. B,12845
- yeast feeding,12846
- produced by dimethylaminoazoben-zene, rats,4215
- spindle cell, oxidized fats and, rats,3592
- spontaneous and induced, mice, 16830
- vit. A content and, rats,11286
- urea formation in,355, 3762, 7420
- vit., in fresh and preserved fish, 5550
- vit. A storage in, scorbutic guinea pigs,11337
- in tuberculosis,16503
- vit. C in, anoxic mice,10970
- in infantile scurvy,11339, 16921
- volume, as influenced by:
- circulation reflexes,5597
- mecholy and adrenalin, turtle,3766
- mistletoe extracts,5766
- weight/body wt. ratio in *Lacerta*,9246
- Liver fluke, (See *Fasciola hepatica*; and under *Fluke*)
- Liverworts, (See *Bryophyta*)
- Livestock, (See also *Animals, domestic*; *Cattle*; *Pig*; *Sheep*; etc.)
- botulism in, cause and premunition in Australia,6224
- toxoid vaccination,6120
- cobalt-deficiency disease in,17385
- comparative pathol. anatomy, significance,2693
- Corynebacterium equi* attacking,18662
- deficiency diseases, survey,15383
- diseases, problems in, review,11729
- wild animals as carriers,3321
- energetic efficiency of productive processes in,7398
- feeds for, oat mill feed as,11472
- genetics and breeding,17072
- helminths, Hawaii,17916
- industries in Far East,6003
- judging, conformation vs. usefulness,17069
- maize breeding experience as affecting,5304
- management, Natal,10186
- mineral deficiencies in, related to minerals in feeds,17604
- morbid anatomy, book,8318
- poisoning by pasture,15092
- preventive inoculations in, statistics,8166
- production, in Australia,2488
- specialized breeds, disadvantages, 17069
- Livistona* (p.1864), n. spp.,11864
- Larus* (p.1876) *agirus*, on beans, life history, Sicily,5044
- ascarii*, new race from *Erysimum*, 16032
- Lizard(s), (See also *Reptilia*; and under genera, e.g., *Lacerta*)
- color changes in,3937
- controlled by temp. and light,7607
- decrebration effects,7614
- fence, pituitary body, cytology,9690
- genitalia, folliculin as affecting,9769
- hypophysectomized, test animal for intermedin,12964
- Lloyd, Francis Ernest, biography,3432
- Lloydia, establishment,3435
- Loasaceae (Dicotyledones), p.1863
- Lobelia* (p.1867), n. vars.,11897
- alkaloids, pharm.,4148
- amoena*, seed development,15520
- syphilitica*, polymembryony,11914
- Lobeline, expectorant action,5758
- use in detn. of circulatory velocity, man,7739
- Lobodon* (p.1883) *carcinophaga*, body measurements, life hist.,7049
- Lobster, (See also *Homarus*; *Shellfish*)
- packing and handling, health problems in,15322
- Local immunity, (See *Immunity, local*)
- Lockjaw, (See *Clostridium tetani*)
- Locomotion, (See also *Flight*; *Movement*)
- analysis, man,471
- apparatus for measurement of propulsive forces generated in, 3602

Locomotion (continued)

- in fresh water jellyfish, 3275
 gait, complete removal of muscles as
 affecting, rabbit, 16720
 disorders of components in cerebellar
 path., 4039
 kinetics, *Nereis*, 14744
 longitudinal transection of corpus callo-
 sum as affecting, dog, 4020
 muscle function in, 4042, 12643
 pattern, development in infant, 12643
 processes in running men, 2257
 quadrupedal, dynamics, 4049
 reflexes in earthworm, 4044
 speed, preliminary feeding as affect-
 ing, rat, 2182
 speed gradient, goal gradient and, rat,
 9438
 swimming, by inhalation of water (jelly
 fish), 3275
 pelvic fins as affecting, 6955
 walking, forces and energy changes in
 leg during, 4041
- Locoweeds. (See *Astragalus*.)
- Locust, black. (See also *Robinia*.)
 nursery diseases, control, 3169
 root knot (*Heterodera marioni*), con-
 trol by hot water treatment, 3169
 migratory. (See also *Locusta migratoria*.)
 pigment in excreta, chem., 12183
 shipmast, history and distr. in eastern
 U.S.A., 6533
- Locusta* (p.1875⁴) *migratoria*, alimentary
 tract, anatomy, 9786
- Lodoicea seychellarum*, seed germination
 and culture, 10229
- Loganiaceae (Dicotyledones), p.1866⁴
- Loliginidae (Mollusca), p.1872⁴
- Loligo* (p.1872⁴) *pealii*, axon membrane and
 protoplasm resistance in, 11137
 electrical impedance of axon during
 activity, 11136
 giant nerve fibers, function, 4037
 muscle, nitrogenous extractives, 4046
vulgaris, spermatheca, 1611
- Lolium* spp., resistant to Hessian fly,
 1782
italicum, composition, changes during
 development, 17595
- Lomatium* (p.1866³), n. syn., 1158
- Lonatura* (p.1875⁴), n. spp., 16087
- Lonchocarpus*, patents for, 1911-1938, 5076
 review of literature of, 5077
 as source of derris, 12023
- Longevity. (See also *Age*; *Senescence*.)
 in beetle (*Stromatium*), 8651
 body constitution and, 4433
 diet as affecting, rat, 14554
 14555, 16465
 factors affecting, man, 433
 food supply and, *Daphnia*, 431
 hypertension as affecting, 5719
 of insects during inanition, 10771
 of mosquito, filariasis as affecting, 8694
 in relation to precision of product for-
 mula for estimation of linkage,
 5302
 of terns, 5413
- Longipediidae (Crustacea), p.1878²
- Lonticea* (p.1867³), n. syn., 1158
- canadensis*, note, 15493
- Lophobasileus* (p.1882³), n. subsp., 8345
- Lophogobius* (p.1880³) *cristulatus*, 10623
- LOPHOPETALAEAE (Dicot.), n. tribe in
 Celastraceae, 15504
- Lophopetalum* (p.1866⁴), n. spp. and n.
 combs., 15504
- Lophophora williamsii*, vision-producing
 character, as used by Kiowa In-
 dians, 12475
- Lophophorus* (p.1881²), n. spp., 16077
- Lophortyx* (p.1881²) *californica*, killed by
 snake, 5207
 nesting cycle, factors affecting, 1878
 seasonal movements and social rela-
 tions, 10818
vallidula, *Hexamita* from, 15964
g. gambeli, *Hexamita* from, 15964
- Lophotaxis* (p.1869³) *valles*, life cycle,
 5111
- Lophorhynchus aquilus aquilus*, *Cyclocladus*
 from, 17983
- † *Lophorhynchus* (p.1877³), tax., 6945
- Loranthaceae (Dicotyledones), p.1865²
- Loranthus* (p.1865²) *jambosa*, 10151
- Loricata* (Reptilia), p.1880⁴
- Loudetia* (p.1864³), n. spp., 2828
- Louping-ill, G-strain, virus spread in
 nerves and affinity for gonads, 9947
- Louse. (See *Lice*.)
- Lovebirds. (See *Parakeets*.)
- Loxia* (p.1882⁴) *c. curvirostra*, nesting data,
 Belgium, 3829
- Loxostege sticticalis*, control, 15905

- Lubimenko, V. N., biography, 17
- Lucanidae (Coleoptera), p.1876²
- Lucernaria* (p.1869³) *discoidea*, on *Zostera*,
 3273
- Lucerne. (See *Alfalfa*; *Medicago*.)
- Lucilia* (p.1878³). (See also *Blowfly*.)
eximia, larvae, cultivation, 15922
sericata, in animal wounds, treatment
 for, 15923
 diapause and metamorphosis in, 5060
 larvae, chem. comp. during develop-
 ment, 266
 larvae, ingested, fate of, 1515
 larvae, urease prep. from, 12680
 on sheep, control, 6703
 urease and ammonia, in larvae of,
 10441
- Lucimeter, distillation, for measuring daily
 amts. of radiation, 16243
- Ludius* (p.1876³), syn. and n. spp., 10591
- aeripennis* *destructor*, L. H. and food of,
 12203
divaricatus, larvae described, 14244
- Ludvigia* (p.1866³), n. var., 6381
- LUDWIGOMYCES (Fungi) (p.1862²), 15453
- Lues. (See *Syphilis*.)
- Luffia* (p.1877²) *ferchaultella*, dist., dis-
 persal and habitat, 12576
- Lugol's solution. (See under *Iodine*.)
- Lumber. (See also *Wood*.)
 beetles (*Lyctus*) attacking, control,
 3197, 5052
 compression- and tension-wood, 15630
 felled poplar, *Xyleborus* as affecting,
 France, 8653
 furniture wood, borers in, Java, 14130
 of India, trade names, 13962
 permanent set, relation to water con-
 tent of wood, 4893
- Lumbriculus variegatus* association forma-
 tion, 14696
- Lumbricidae (Annelida), p.1871⁴
- Lumbricillus lineatus*, effect on sewage bac-
 terial beds, 6217
- Lumbriculidae (Annelida), p.1871⁴
- Lumbricus* (p.1871⁴). (See also *Earthworm*.)
terrestris, chromaffin nerve cells, nature,
 5970
 conduction in neurochords, 446
 function of neurochord of ventral
 chain in, 446
- Lumbrineridae (Annelida), p.1871²
- Lumbrineris* (p.1871²), syn., 17962
- alimentary cells, mechanism of secretion
 of Golgi bodies in, 2479
- Golgi apparatus in intestinal cells, 1733
- Luminal. (See *Phenobarbital*.)
- Luminescence. (See also *Fluorescence*;
Light.)
 in absence of O_2 , *Mnemiopsis*, 1901
- Lung(s). (See also *Gills*; *Respiration*, al-
 veolar; *Swimbladder*.)
 abnormal tissues, blood supply, 615
 abscess, acute, 7867
Klebsiella pneumoniae from, 6178
 accessory, 762
 actinomycosis, case study, 11645
 alveolar air, alcohol in after ingestion
 and exercise, 276
 CO_2 in fresh water and carbonated
 water baths as affecting,
 14605
 after voluntary apnea effected in
 drafts at various temps., 16581
 O_2 in fractional samples, 5607
 alveolar phagocytes, vit. C in, 335
 aplasia, path., 9608
 arteries, sclerosis in cardio-pulmonary
 syndrome, 631
 Boeck's sarcoid as affecting, in uveo-
 parotid fever, 4203
 bronchi, muscle, drugs as affecting,
 2250
 broncho- and vasomotor responses,
 guinea pig, 11047
 calcification, tuberculin anergy in,
 11523
 cell constituents, effect on blood lipids,
 12752
Coccidioides primary infection, 4639
 4640
 collapse. (See *Pneumothorax*.)
 curious bodies, in gold miners, 7927
 dead space, factors affecting, 3774
 disease, alcohol tolerance test in, 8747
 chronic, Cor pulmonale and, 18110
 O_2 consumption in, 2275
 by pleuro-pneumonia-like micro-or-
 ganism, mice, 14921
 respiratory reflexes and, 14589
 distension, effect on gastric hunger mo-
 tility, frog, 12643

Lung (continued)

- edema, after bilateral vagotomy, 12922
- hemorrhagic, streptococcic vaccines
 prepared from, 4503
 therapy by positive pressure respira-
 tion, 11043
 vagotomy and tracheotomy as affect-
 ing, 7864
 effect on bacteria introduced in blood,
 8773
 emboli, and pulmonary and coronary
 artery reflexes, 4061
 emulsion, effect on blood lipase in pul-
 monary circulation, 16429
 eosinophilia, transitory infiltrations
 with, 4455
 epituberculosis, morbid anatomy, 619
 fibrosis, due to silicosis, acute anoxia
 as affecting, 2423
 growth of air passages in birds, 7984
 histamine liberation, photodynamic ac-
 tion and, 9103
 in response to trypsin, 5783
 inflammation, hemorrhagic pathogenesis
 of pneumonia and, guinea pig,
 7861
 as influenced by:
 drugs, 16800
 permittite, 11867
 pulmonary sclerosis, 7713
 silicate dusts, 11868
 inheritance of cysts and malformations,
 man, 12560
 lactic acid metabolism, caffeine as af-
 fecting, dog, 7798
 left, congenital absence, 760
 lobectomy, after bronchiectasis, effect
 on lung vol., 5606
 local anaphylaxis, autogenous urine in-
 ducing, 18435
- lympogranulomatosis, histopathology,
 572
- mean capacity, work as affecting, 16573
- musculature, structure in frog, 9705
- parabilar areas, tuberculous changes,
 vs. apices, 13243
- perfused, observations, dog, monkey and
 guinea pig, 3775
 technic, guinea pig, 5781
 silica and asbestos as affecting, tubercu-
 losis and, 13280
- silicosis, nature of mineral particles in
 ash, 2420
 potters', 11864
- tissue, histamine and other bases in,
 cattle, 12801
- supravital staining, 11432
- Torulopsis glabrata* exp. infection, 4642
- tumor, in A stock mice, 9533
 as cause of intracardiac tumor, 612
 chronic diseases and, incidence in,
 radium miners, 7843
 diagnosis, infections and, 14835
 in generator gas workers, 4205
 invasiveness, histogenesis, 9589
 metastasis from adrenal gland, hist.,
 5805
 from uterus, 7856
 mineral oil and, 13836
- pneumectomy in therapy, 7852
 produced, by chemicals, mice, 16831
 by dibenzanthracene, mice, 14896
 by tar in lampblack, mice, 606
 by tarry dusts, mice, 16843
 spontaneous and induced, mice, 16830
- tobacco as affecting, 19216
- vessels, differentiated pressures, study,
 4071
 drugs as affecting, frog, 9574
 visco-elastic properties, cat., 7529
 vital capacity, in Bengalee school boys,
 5922
 heart disease and, 14595
 of high school and college students,
 17033
- as influenced by:
 age, 368
 barbiturates, in pregnancy, 2169
 cysts and emphysema, 369
 exercise, 2115
 variations, 7527
- volume, blood in chest as affecting,
 16572
 detn., 14596
 lobectomy for bronchiectasis as af-
 fecting, 5606
 vol. and subdivisions, man, 14590
- Lungworms, of pig, in earthworms, con-
 trol, 17915
 relation to epizootic pulmonary adeno-
 matosis in sheep, 17886
 of sheep, adenomatosis and, 17913
 Sweden, 5091
- Lupeol, chemistry, 12043

- Lupine(s). (See also *Lupinus*.)
 alkaloids in, chemistry,.....10287
 carboxylase activity in,.....15777
 immunizing power vs. bacteria,.....8624
 Lupinism, in animals, Morocco,.....11748
Lupinus (p.1866³). (See also *Lupine*(s).)
 tax.,.....1158, 4763, 4781
 of Pacific states,.....6400, 10130, 11854
 of seedlings, growth, as influenced
 by vitamins,.....12643
 two recessive linked mutations, 8942
luteus, seeds, effects of aging on, 12514
sericeus var. *flexuosus*, alkaloids in,
17665
 Lupus. (See under *Dermatosis*.)
Luscinia (p.1882¹) *m. megarhyncha*, bird
 banding,.....14296
svecica cyaneula, nesting data,.....7008
 Luteose, comp. and formation by *Penicil-
 lium luteum*,.....8594
 Lutra. (See also *Otter*.)
 Luy's body. (See *Brain, subthalamus*.)
 LUZONELEOTRIS (Pisc.) (p.1880³)
nasugbua, from Batangao,.....8810
Lycena (p.1876⁴) *mariposa r. penroseae*,
8790
 Lycenidae (Lepidoptera), p.1876⁴
Lycan pictus, liver cells, intranuclear
 crystals in,.....4358
 as reservoir of *Rickettsia canis*,.....8219
lychnis (p.1865²), petal and corona, 13779
viscaria, *Phytophthora stemrot* of, 15794
lychnodiscus (p.1866²), n. spp.,.....2843
lycanthes (p.1867²), n. spp.,.....2882, 6437
 Lycoperdaceae (Fungi), p.1862⁴
 Lycoperdales (Fungi), p.1862⁴
Lycoperdon (p.1862⁴), descriptive notes,
2812
marginatum, anatomical structure of,
6358, 17496
subpedicellatum,.....2812
Lycopersicon chilense, possible course of
 disease resistance,.....5316
esculentum, hybrid with *L. hirsutum*,
15858
 Lycopersicum. (See also *Solanum; Tomato*.)
 Lycopodiaceae (Pteridophyta), p.1863⁴
 Lycopodiales (Pteridophyta), p.1863⁴
Lycopodium (p.1863⁴), n. spp.,.....2828A
 apical meristems,.....6374
 distr. in India,.....4755
ophioglossoides, in Rhodasia,.....8423
Lycopis (p.1867¹) *arvensis*, embryogeny,
2915
Lyco (p.1874³), n. sp.,.....10587
 Lycosidae (Arachnida), p.1874²
 Lycitidae (Coleoptera), p.1876²
lyctus (p.1876²), attack on standing
 timber as affected by starch de-
 pletion,.....3197
 attack on timber (*Quercus*), preven-
 tion,.....5052
 carbohydrate nutrition,.....3197
 Lye. (See *Sodium, hydroxide*.)
 Lygaeidae (Hemiptera), p.1875⁸
Lygaea nematus (p.1875⁸), spp. enemies of,
5051
pini, natural enemies,.....10431
Lygaeus (p.1875⁸) *equestris*, idiochrome
 some,.....14358
lygidea mendax, control of,.....10400
Lygus (p.1875⁸) *communis*, control of,
10400
elitus, damaging cotton, Ariz.,.....10407
hesperus, damage to alfalfa-seed fields,
 and control,.....15907
 damaging cotton, Ariz.,.....10407
pratensis, on apple, control,.....12177
 on potato,.....17873
oblineatus, on cotton,.....10407
 Lymantria (p.1877¹), larvae, unlearned
 visually-detd. reactions in,.....3987
 dispar. (See also *Porthetria dispar*.)
 morph. of abdominal somites,.....3358
monacha. (See also *Liparis monacha*.)
 dist. from similar larvae and moths,
14183
 harmless insects resembling,.....10430
 L.H., control,.....14182
 new poison for,.....5049
 parasite(s) of,.....10452
 parasitized by tachinid,.....10452
 resemblance to other moths,.....10430
 Lymantriidae (Lepidoptera), p.1877¹
 Lymanaea (p.1872³), n. species *Cercaria*
 from,.....10542
 physiological races, book,.....12313
columella, *Cercaria* n. sp. on,.....5110
rubiginosa brevis, as intern. host of
Echinostoma,.....17911
stagnalis respiration,.....14601
truncatula, habitat in dry season, fascio-
 liasis and,.....12261
viatrix, *Fasciola* cycle in,.....14192
 Lymnaeidae (Mollusca), p.1872²
 Lymph. (See also *Body, fluids; Lymphatics;*
Lymphocytes.)
 fat absorption, lymph stasis and,.....7367
 flow, as influenced by:
 arterial pulsations,.....10896
 hypertonic salt and dextrose solns.,
7396
 formation, as influenced by acidification
 and alkalization,.....12744
 by x-radiation, dog,.....14470
 peripheral, cell content,.....7937
 pressure, cervical, detn., dog,.....13124
 protein, site of origin,.....7396
 rôle in transmission of *Wuchereria* to
 man,.....8714
 tyrosine in after intravenous adm.,
12643
 urea, glucose and creatinine in, after
 inj.,.....7377
 Lymph, hearts, amphibia, study,.....16735
 center of beating, brain and nerve
 endings as affecting, toad, 14733
 coccygeal, innervation in amphibians,
15014
 destruction, circulatory and humoral
 alterations after, *Bufo*,.....16406
 importance, toad,.....16728
 synchronism and integration of spinal
 centers, *Salientia*,.....11143
 Lymph nodes. (See also *Hematopoiesis;*
Spleen.)
 in aplastic anemia, path.,.....5835
 effect on metastatic ascites cancer,
 mouse,.....13229
 emulsion, in production of infectious
 mononucleosis, monkeys,.....5824
 extract, from Hodgkin's disease, effect
 on brain,.....14982
 formation during alarm reaction,.....4324
 of groin, eosinophilic abscesses with
 filaria,.....14180
 in Hodgkin's disease, Gordon test and,
7941
 hyperplasia, effect on lymphocytes,
11322
 iron content, dibenzanthracene as af-
 fecting,.....14911
 in leucemic lymphoblastoma, calf, hist.,
608
 malarial sporozoites in,.....5088
 metastatic cancer from pancreas, 14879
 in neoplastic tissues, hist.,.....603
 primary tuberculosis infection, adults,
4239
 root of lungs, earliest adult tuberculosis
 in, study,.....13243
 in sarcoma-bearing mice,.....599
 in transplantation of Jensen sarcoma,
 rats,.....13205
 vaccinia virus passage through,.....2631
 venereal lymphogranuloma as affecting,
16894
 Lymphadenitis, bovine caseous, source
 and etiology,.....11756
 caseous, in goats and sheep,.....15358
 epizootic, prontosil therapy of strepto-
 coccic,.....4562
 Lymphadenopathy, cervical, syphilis as
 factor in bioscopic diagnosis,.....9963
 Lymphatics. (See also *Lymph; Lymph*
hearts; Lymph nodes; Lymphocytes;
Lymphoid.)
 absorption, from nasopharynx,.....364
 cysts, peripelvic of kidney,.....4201
 development in Anura,.....9686
 of eyelids, man,.....7938
 fat absorption into, hemolytic agent in
 lymph during,.....351
 in fish,.....16559
 gastric cancer dissemination by,.....7845
 in inflammation, review,.....9606
 of mammalian heart, anatomy,.....7942
 metastases of mouse cancer in,.....13208
 of palatine tonsils,.....674
 pathway from nose to cervical duct,
 mammals,.....676
 rôle in spread of tuberculosis,.....13247
 Lymphatic system, anatomy, guinea pig,
4321, 4325, 15006
 lymphopoietic organs, piropiasmosis
 as affecting, pig,.....12246
 poliomyelitis virus absent from,.....13589
 reactions to repeated injections of
Bacterium monocyctogenes,.....11522
 as reserve of mesenchymal derivatives,
11522
 in spleen at different ages,.....2429
 Lymphocystis, virus-induced, in fish, inclu-
 sion bodies,.....959
 Lymphocytes. (See also *Leucocytes*.)
 in acute inflammation,.....14916
 in bacterial injection, as measure of
 immunity, rabbits,.....4257
 circulation and count,.....7937
 colchicine as affecting, mice,.....591
 count, after therapeutic fever,.....10939
 effect on bacterial toxins in vitro, 11550
 in leucemic lymphoblastoma, calf,.....608
 nucleoproteins, differential staining and,
7388
 proliferation rôle in immune reactions,
11522
 in relation to erythrocyte production,
5882
 resistance to autolysis in diseases,.....250
 small, significance in aplastic anemia,
5835
 types, in man and guinea pig,.....11322
 wandering, in small intestine of mam-
 mals, hist.,.....15040
 Lymphogranuloma. (See *Hodgkin's disease*.)
 benign. (See *Schaumann's disease*.)
 inguinal. (See also *Frei test*.)
 in Africa,.....11638
 blood studies,.....16814
 in Brazil,.....17288
 clinical study of ♀ cases,.....17209
 complications,.....15326
 Donovan bodies in, culture negative,
13599
 Frei antigen, from mouse brain,
 standardization,.....13426
 plus auto-urine therapy,.....17212
 Frei test for,.....15283
 with mouse-brain vs. human
 antigen,.....4499
 histopath.,.....17286
 immunization, chemo- and sero-
 therapy,.....17209
 inclusion bodies in tissue culture,
2622
 liver function tests in,.....17334
 relation to regional ileitis and ulcer-
 tive colitis,.....607
 review,.....16894
 serodiagnosis, by formalin test,.....890
 serum lipids and proteins in,.....11619
 skin test for, technic,.....13626
 Takata-Ara reaction in,.....17334
 vaccine for, prep.,.....13626
 virus, elementary bodies in exp.,
15224
 morph. and life cycle,.....2615
 pathogenesis in exp.,.....15224
 tissue culture,.....2622, 11612
 in placental medium,.....13576
 Lymphoid tissue, in human bone marrow,
13296
 metastatic tumors, structure, vs. pri-
 mary tumor,.....7822
 tumors, estrogens and,.....5808
 Mikulicz's syndrome, uveoparotid
 fever,.....4197
 spinal epidural space,.....16839
 Lymphomatosis, avian, etiology,.....6223
 bovine, etiology and general account,
6228
lyngbya (p.1860³), n. sp.,.....8385
 Lynx, Alaskan, color mutation in,.....5240
 Lynx (p.1883³), food habits,.....10821
Lyonothamnus (p.1865⁴), in California,
2848
 Lyophilization, reaginogenic serum preser-
 vation by,.....6108
 Lyperosia, in stables, Dutch E. Indies,
3245
 LYRASPIIS (Hom.) (p.1875⁴),.....10605
 Lyre bird, Australian, book,.....16084
 Lysimeter. (See under *Soil*.)
 Lysin(s). (See *Bacteriophage; Fibrinolysin;*
Hemolysin; Streptolysin; etc.)
 deficiency, effect on genital function,
 rat,.....9329
 on growth,.....14530
 effect on metabolism, dog,.....10972
 in high fat diets, fatty livers and, rats,
3700
 α-N-monomethyl- and α-N-dimethyl- for
 growth,.....5536
Lystiphebus (p.1878²), spp. parasite of
 aphids,.....10451
 Lysocithin, formation by snake venom,
520, 521
 Lysol. (See *Cresol*.)
 Lysocithin. (See *Lysocithin*.)
 Lysozyme, effect on spirochaetes,.....865
 gonorrhea (adnexal) therapy by,.....930
 lysates of anaerobic bacteria by, speci-
 ficity and toxicity,.....878
 properties,.....10849
 of saliva, effect on oral microorganisms,
907
 Lyssa. (See *Rabies*.)
 Lythraceae (Dicotyledones), p.1866²
Lythrypnus (p.1880³), n. spp.,.....10623

- M**
- Maba* (p.1866*) *sandwicensis* (*Diospyros*), 17524
Mabea (p.1866*), n. spp., 2885
Macaca (p.1882*). (See also *Monkeys*; *Pithecius*.)
 brachium conjunctivum, termination in thalamus, 678
 cerebral cortex, blood supply, 683
 olfactory formations, 9676
 regeneration of sciatic nerve after section, 4309
trus, microfilariae in, 6752
mulatta, infection expts. with ascarids from man and pig, 15946
 prostate and seminal vesicles, sex hormones as affecting, 16931
radiata, gestation in, 5232
 mating in, 5232
 menstrual cycle in, 5232
rhesus, allergy in passively locally sensitized abdominal organs, 524
 exptl. malaria with plasmodia free from red cells, 15953
 lungs, blood-perfused, observations, 3775
 malaria in, immunization to, 6129
 military necrotic process of nervous system, findings, 654
 new Bacteriaceae from intestines of, 5362
- Macacus*. (See *Macaca*.)
Macadamia, nut characters, correlation and evaluation in selecting vars., 2878
Macandrevia (p.1871*) *syn.*, 16003
Macchia. (See also *Cypariss*.)
 plants, water economy, 10789
 MacClement, W. T., biography, 12487
Maccullochella macquariensis artificial propagation, 12631
 MacDougal, Daniel Tremblay, biography, 12481
 McGregor, Richard C., biography, 3428
 Machado test, for Chaga's disease, reliability, 9995
Machaeranthera, selenium-tolerant spp., 10179
Machaonia (p.1867*), n. sp., 6437
Machilidae (*Thysanura*), p.1874*
Machilis (p.1874*) *steinböckii*, 12413
Machilus thumbergii, wood stain due to *Graphium*, 12122
 Mackerel, dermis, structure, 4345
 McKinley, Earl Baldwin, biography, 7081
Maclura pomifera, utilization by fox squirrel, 10827
Macracanthorhynchus (p.1870*) *hirudinaceus* embryology, 769
MACRACARA (Pisc.) (p.1880*) *prisca* (Ter.), 12431
Macrocarpaea (p.1866*), n. sp., 2882
Macrocentrus (p.1878*) *anchylurus*, on peach moth larvae, with *Ascoaster*, 10456
Macrocheles (p.1874*) *appalachensis*, 17982
Macrochytium (p.1861*), classification, 17490
Macrocyclus (p.1878*) *sp. rudimentary* feet, 6837
 Macrocytes. (See under *Erythrocytes*.)
Macroderoides (p.1869*) *typicus*, in *Heliosoma*, 5107
Macroglema (p.1864*), n. sp., 8421
 Macrolepidoptera (Lepidoptera), p.1876*
Macromia (p.1875*) *pacificia*, in Ohio, 3860
Macrones (p.1876*), tax., 10592, 10595
 Macronucleus. (See under *Nucleus*.)
Macrophomina phaseoli, causing crown rot of sugar beet, 12128
MACROPINNA (Pisc.) (p.1879*), *Microstoma*, 10619
 Macroptinidae (Pisces), p.1879*
Macropodus opercularis-*M. o. concolor*, hybrids, color pattern, 5347
MACROPSIDAE (Homopt.) (p.1875*), 18017
Macropsis (p.1875*) *trimaculata*, life hist., distrib., and diseases, 10390
Macropterna (p.1875*) *conveza conica*, re-descript., 14259
Macropus, n. spp. of Nematode from, 14214
 Macrorempsiidae (Pisces), p.1879*
 Macroscelididae (Mammalia), p.1882*
Macrostiphia (p.1867*), n. var., 11900
Macrostiphium (p.1875*) *plat.*, physiology of wing development, 3349
 roscæ, parasites and predators of, 10451
solanifolia, digestive system, 6918
 embryonic determination in, 13349
 injury to potato, 17878
 wing morph. measurements, 12383
 thermopsaphis, 16039
- Macrosporium* (p.1863*), tax., 15464
 commune, on *Trifolium pratense*, vaccination expts. with, 17809
 sarcinaeforme, pathogenicity to tomato and clover, 14044
Macrosteles divinus, vector of lettuce yellows, control, 12199
 as vector of purple-top wilt of potato, 3169
 Macrostromidae (Platyhelminthes), p.1869*
Macrostromum (p.1869*) monograph, 12292
 phillipsi, 6792
 Macrothecinae (Lepidoptera), p.1877*
 Macrothricidae (Crustacea), p.1873*
 Mad itch. (See *Pseudorabies*.)
Maerua (p.1865*), n. spp., 15483
 Maggots, blood-sucking, in eagle nest, Alaska, 1564
 therapy, of wounds, etc., mechanism, 17256
 Magnesium, amt. in mollusc., 6823, 6824
 antagonism to Ca on nervous system, 7749
 in ash of *Cysticercus*, 17910
 balance, Mg and Ca as affecting, 10993
 in blood. (See under *Blood*.)
 deficiency in *Citrus* spp., 8618
 effect on oral and dental tissues, 13265
 on vegetables, in greenhouse soils, 2992
 in fruit trees, 17803
 in orchard fruits, Quebec, 17803
 in potato, internal brown spot as symptom, 17797
 relation to peach chlorosis, 15837
 in Scotch pine, 1932
 in diet. (See under *Diet*.)
 diffusion into peritoneum, 9075
 parathormone as affecting, dog, 3798
 distr. after parenteral admin. of $MgSO_4$, 12654
 effect on:
 acetylcholine action, 14815
Chlorella, 12060
 crop plants and Ca content, 15528
 fluoride toxicity, 4152
 heart, 3548, 12643
 muscle, 16304
 muscle chronaxie, frog, 13094
 myotonia, goat, 2312
 potatoes, 13803
 ultra-violet stim. of *Nereis* eggs, 7257
 uterine response to post. pituitary extracts, 9301
 intramuscular inj., effects, 12643
 intravenous inj., cardiovascular and neuromuscular changes after, 12643
 effect on electrocardiogram, 13133
 in leaves, relation to Ca and K contents, 3058
 metabolism, pregnancy as affecting, man, 3973
 review, 14440
 milk as source, rat, 9169
 mineralized milk and, for calves, 13260A
 in muscle, demonstration, 7695
 distr., 10876
 in plants, as index of dolomite decomp., 17607
 rôle in distr. of Spongillidae, 3498
 in peach chlorosis, 15837
 in soil fertility, 1354
 sensitivity of frog heart to, 4172
 sodium and, ion antagonism in action upon oxalate ion, 7251
 in soil. (See under *Soil*.)
 as supplement to milk diet, for calves, 17083
 in therapy of angioma, 16860
 toxic symptoms, 11362
 chloride, effect on diuresis due to Na_2SO_4 , 16648
 oxide, in prevention of insecticide injury to trees, 10394
 sulfate, effect on:
 circulatory system, 7766
 intestinal absorption, 16564
 myotonic muscle, 11231
 intestinal absorption, anoxemia as affecting, 12907
 as measure of circulation time, 5710
- Magnesium (continued)
 sulfate (continued)
 toxic to *Tradescantia*, effect on stomatoplasma, 1733
 Magnetism, effect on man, 117
Magnolia (p.1865*), tax., 427
 of Oligocene, Germany, 1724
grandiflora, embryo development, 399
 volatile oil of seed, composition and characters, 1515
 Magnoliaceae (Dicotyledones), 1865*
 Magney. (See *Agave*.)
Mahonia (p.1865*), n. sp., 1861
 resistance to *Phymatotrichum*, alk.oids as factors in, 4989
 Ma huang. (See *Ephedra*; *Ephedra*)
Maia squinata, tissue extracts, as an.ing organs, 5778
 Maize. (See also *Sweet corn*.)
 auxins produced in excised roots, 4918
 bacterial wilt. (See also *Phytophthora stewartii*.)
 pathogenicity, amt. and source of N as affecting, 3169
 status in U. S. A., 1938, 15889
 var. resistance tests, 17827
Basisporium gallarum, in secondary ears, 14047
 breeding, arrangement of plats in tests, 16215
 experience, effect on livestock breeding, 5304
 of improved selfed lines, 16172
 continued inbreeding, 12532
 crazy top disease, 17804
 cytogenetics, chromatid behavior after breakage at meiotic anaphase, 10717
 cytology, of dormancy, 8909
 colchicine and polyploidy, 1698
 favorable genes, method for locating, 1743
 frequency of x-ray induced interchanges, 5311
 genetic control of gametophyte development, 5809
 of xenia, 14362
 inheritance of 50-vestigial glume, 8943
 lethal-linked kernel variation, Lagkit, 127
 linkage map of 10th chromosome, 7133
 recent linkage studies, 5331
 sex intergrades in dioecious, 12531
 single cell mosaics, relation to nuclear control, 8935
 translocations, involving chromosome 8, 8924
 and mosaic formation, 175
 zygotic lethal in chromosome 1, linkage, 8932
 deterioration of shelled, chem. detn., 4855
 diet, pathology due to cyanides in, man, 13145
 and eugenics, 62
 fodder, making compost from, 6494
 foliar diagnosis, N carriers as affecting, 17676
 hereditary variation in nutrition, 12527
 hormones from, effect on *Ustilago zeae*, 6568
 insect pests, *Aphis*, plowing as affecting, 17864
 corn borer, alternate food plants, N. J., 17867
 control, 17883
 and F injury to plants, 17863
 number per stalk and % stalks infested, 14120
 Poland, 1494
 2nd generation, 10418
 earworm, desilking as affecting, 17878
 relation to climate, Va., 17868
 fall armyworm, control, 17878
 root, crop rotation as affecting, 17865
 sand wireworm, control, 5041
 kernel discoloration, 17806
 ligule ontogeny and anatomy, 6450
 nematode disease (undetn.), 15818
 new chytrid parasite, 17490
 NPK nutrition, Ca as affecting, 10298
 nuclear size in plumular meristems, 3457
 origin, 16166
 of selfed lines, relation to value as hybrids, 5332
 origin and history, 18283
 planting date, effect on Jap. beetle injury, 12208
 products. (See *Corn oil*; *Gluten feed*.)
 resistant to corn borer, 10417, 17876

Maize (continued)

- Rhizoctonia solani* on, vaccination exps. 17809
 seed characters, relation to hybrid 16184
 seed characters, disease and storage as affecting 1480
 seed characters, liquid-air temp. 16180
 seed characters, injury by *Penicillium*, soil factors in, 6667
 seed characters, (See also *Ustilago zeae*)
 non-toxic to animals, 12165
 sprouted, effect on winter milk, 13359
 vitamin in, 16507
 whole bud disease, Zn availability related to, 6481
 Maize borer, (See *Pyrausta nubilalis*)
 Maize root worm, (See *Heliothis obsoleta*)
 Majidae (Crustacea), p.1874
 Majoran, (See *Origanum majorana*)
 Majorana hortensis, culture, 6540
 Makaira (p.1879) nigricans ampla, post-larval growth, 6969
 Malachite green, effect on *Clonorchis sinensis* in vitro, 4552
 Malachius (p.1876), n. spp. from California, 17994
 Malaclemys (p.1880) centrata, developmental rate, temp. as affecting, 15074
 eggs, mineral metabolism during incubation, 12823
 Malacosoma (p.1876), genitalia, 16042
 americana, mating and egg laying, 12401
 distria, attacked by *Sarcophaga*, 15927
 fragilis, distrib. and life hist., 10402
 neustria, damaging oak in Rumania, 15910
 Malacostraca (Crustacea), p.1873
 Malarene, in malaria therapy, 2657
 Malaria, (See also *Anopheles*; *Mosquitoes*; *Plasmodium*)
 address, 5087
 adrenal deficiency in, 8684
 anemia, effect of Cu and Fe, in paretics, 5838
 etiology, 12557
 of laborers on tea estates, 11320
 types, 14931
Anopheles gambiae as vector, Brazil, 8663
Anopheles messeae and, near Ravenna, 8701
 A. stephensi, non-infective race, India, 12226
 anophelines, Bengal, 12219
 control, 15914
 entoray machine, 10444
 by predaceous fish, Bengal, 12225
 habitats, distr., and control, Italy, 6655
 infection rates, India, 10442
 larvicides from plant principles, 12223
 zoophilism and anthropophilism, 15924
 of anthropoids, effect on dementia praecox patients, 12264
 avian, asexual cycle, exoerythrocytic stages, 10499
 primary phase, 8707
 asexual periodicity, factors affecting, 10510
 atabrine as affecting, 11209, 13178
 chemotherapy, 15183, 15184
 effect on body temp., canary, 10493
 endothelial stage infection, chemotherapy, 11590
 exoerythrocytic *Plasmodium* vs. *Toxoplasma*, 15966
 exptl. erythroblastosis as affecting, 10492
 immunity relations, 2607, 11571
 multiple-infected red cells in, 1555
 plasmodia, correct name, 8722
 numerical relations to red cells, 6734
 origin of exoerythrocytic, 12254
 rate of reproduction, 10481
 in reticulo-endothelial cells, tissue culture studies, 6732
 staining in tissue sections, 10491
 passive immunity to, 948
 in penguins, exptl. studies, 12265
 in sparrows, Venice, 8711
 splenic infarcts in, 17899
 viruses and vectors, 6733
 benign tertian, reticulocyte infection, 12271
 blackwater fever and diagnosis, 6727
 chemotherapy, 4560, 6144
 8178, 9915, 9930, 11583
 13549, 13553, 15210, 17243
 prophylaxis and, 13535
 chronic, unpigmented cycle of plasmodia, 15952

Malaria (continued)

- comparisons, 15178
 congenital, 6745
 consecutive inoculations with different *Plasmodium* spp., 8169
 control, with drugs, 1549
 Quetta, 15951
 review, 5098, 14174
 Yunnan, 17924
 course of infection, biology of parasite, 15949
 in Darjeeling, Bengal, 15958
 in Delhi, history and problems, 10487
 diagnosis, buffer precipitation test, 14194
 by complement fixation with *Plasmodium* antigens, 6128
 by Henry's melanoferrin reaction, 4547
 protein-tyrosin reaction in, 6753
 staining thick blood smears, 8702
 effect on child mortality, Greece, 15965
 endemic in Africa, 6759, 8709
 epidemiology, Madras, 15970
 hyper-endemic, in Sierra Leone, drainage as affecting, 14185
 immunity, in African natives, 8188
 mechanism, 9912
 relations, 8169, 8170
 incidence and vectors, Szechwan, 14171
 infantile, Bengal, seasonal variation, 15972
 irrigation as affecting, India, 10508
 land reclamation as affecting, Italy, 8664, 8696
 latent, yellow fever vaccination as affecting, 15154
 malignant tertian, correct name for parasite, 8722
 prophylaxis by certuna, 6153
 of monkeys, antibody production in, 13532
 antigen in sera, 8170
 chemotherapy, 15185, 15211
 exptl. with plasmodia free from red cells, 15953
 immunization, 6129
 spleen studies, 6747, 12243
 sulfanilamide therapy, 13536
 natural resistance to *Pl. ovale*, 14190
 in New Mexico, 15913
 in Panama, monograph, 12270
 parasites, in erythrocytes vs. reticulocytes, 17921
 erythrocytic and exoerythrocytic separation, 6732
 free from red cells, 15953
 life cycle in mosquito, illus., 17904
 morph. in thick blood films, 8716
 staining oocysts in living mosquitoes, 12268
 parasite and spleen rates, Somaliland, 8686
 physiogeography and, India, 14191
 primary, parasites vs. severity of fever, 14188
 protosil as affecting, 15186
 quartan, of unknown origin, 12245
 recent research, 3243
 in repatriates from Italian E. Africa, 14184
 reticulocytes in, 8685
 route of infection, man, 5088
 in Sao Paulo, 10490
 seasonal, prevalence, natural infection of A. stephensi and, 12210
 spleen size vs. constitutional type, 15967
 splenomegaly, iodine-quinine therapy, 2665
 susceptibility to indigenous vs. foreign strains, 1548
 tertian, long incubation period, 1567
 virulence of *Pl. immaculatum*, Europe and Africa, 8717
 therapeutic, with anthropoid *Plasmodium*, 12264
 intensity after repeated use of infected mosquitoes, 14163
 in paralysis, 8710
 thiobismol as affecting, 7803
 therapy by adrenalin, 8183
 Ascoli treatment repeated, 8704
 by atabrin, 8187, 8188, 9939
 by malarene, 2657
 by manganous mercuric iodide, 9932
 by plasmochin, clinical data, 9939
 by protosil, 8181
 by quinine, 8187, 8188
 by sulfanilamide, 6150
 transmission, Brit. Guiana, 5090
 virulence, in Rome vs. Ethiopia, 10504
 Malariology, review, 14174

- Malate, effect on liver metabolism, 5529
 Malbranchea (p.1863), tax., 2796
 Maleic acid, dihydroxy-, oxidation by peroxidase, 5464
 Malformation(s), (See *Teratium*; *Teratology*; and under organs and parts affected.)
 Malic acid, in birch and maple sap, 1395
 in ocular tissues, 16354
 Malignancy of tumors, (See under Tumors.)
 pseudomallet, (See also *B. whitmori*; *Meloidosis*)
 Mallophaga (p.1875), (See also *Lice*)
 Mallosus philippinensis, pigment from fruit, chemistry, 15685
 Malnutrition, (See *Diet*; *Fasting*; *Inanition*; *Nutrition*; *Nutritional diseases*, e.g., *Beriberi*)
 Malonate, ethyl benzamido-, α -amino acid synthesis with, 14484
 Malonylurea, (See *Barbituric acid*)
 Malt, (See also *Barley*)
 growth substances from, effect on bacteria, 1059
 worts, bios shortage in, 6258
 Malta fever, (See *Brucella melitensis*; *Br. abortus*)
 Malthodes (p.1876), n. sp., 8332
 Maltose, detn. in sugar mixtures, 16886
 Malturus (p.1882) elegans, tax. and distribution, 10653
 Malus (p.1865), (See also *Apple*; *Pear*; *Pyrus*)
 tax., 15486
 chromosome number and behavior, 8910
 Malva, as trap for wireworm adults, 10406
 Malvaceae (Dicotyledones), p.1866
 cytogenetical survey, 1700
 Malvales (Dicotyledones), p.1866
 Malvastrum (p.1866), n. spp., 11854
 Malvulophis (p.1879) pinguis, descr., 6974
 Mamba, cobra-serum therapy of bite by, 9880
 Mamestra (p.1877), spp. morph. of abdominal somites, 3358
 Mammals (p.1882), of Australia, ectoparasites, 6706
 of Barro Colorado Island, numbers, 8498
 beaver populations in Minnesota, 10819
 blood cells, erythrocytes, size, 667
 origin, 5882
 blood and cell vol. from birth onward, 3633
 blood prothrombin in, 3654
 brain, origin of corpus callosum, 4326
 of California, altitude records, 5222
 capillaries, growth in vivo, 7940
 carotid sinus, development in Equidae, 11377
 chronic arthritis in wild vs. captive, 6234
 cochlear canal in, comparative size, 16956
 deer licks as affecting, 7038
 development of respiration in, 367
 distr. in Kansas, 7038
 dorsal interosseous muscle, comp. anatomy, 4311
 of England, popular ecology, 10683
 erectile tissue of penis, comp. anatomy, 4312
 eye, accommodation, 4000
 fossil, from bone breccia at Sterkfontein, Transvaal, 9724
 of Eugene, Utah, 5225
 of Tertiary, 5084
 function of cerebral cortex, 11141
 gonad descent in relation to development of cranial-caudal polarity, 9680
 hair, coronal scales, structure, 15032
 heart, rotary movements of apex, 13111
 heart wt. vs. body wt., 670
 highway mortality, 7038, 10825
 hyperglycemia and hyperthermia, emotional, 9142
 immunity of newborn, mechanism, 6098
 inner ear, sensory areas, comp. anatomy, 11382
 of Java, names in Latin, Dutch and Javanese, 1661
 lymph, passage from nose to cervical duct, 676
 of Mongolia, literary and colloquial names, 7053
 nerve net of hollow organs and spleen, structure, 15013
 nervous system, cortical and subcortical localization patterns, interrelationship, 16977

- Mammals (continued)**
 occurrence of organ of Ackerknecht in, 7929
 of Oklahoma, 111, 1822
 olfactory and accessory olfactory formations, nuclear configuration, 15011
 origin and dispersal, 3418
 parasites, Alaska, 1564
 pathogenicity of *Toxoplasma* for, 12269
 pelage color, humidity as affecting, 7046
 wood rat, 10686
 popular book, 10686
 populations, after afforestation, 161
 rectal columns, development, structure and functional significance, 11378
 relation of pericardial sac to diaphragm in, 7930
 relationships, precipitin test in detn., 6117
 retina, Cs content, 5920
 ruminants, gastro-intestinal parasites, control, 15947
 licking disease, etiology, 17389
 liver parasites, 12260
 nutrition, review, 14440
 nutritional physiology, 4405
 trypanosomes in, morph. and tax., 8692
 skins, storage, 5222
 S compounds in blood globins, 14494
 tabulation of tertiary age of living, Germany, 17032
 taste buds, 15048
 trapped by plants, 7038
 tuberculosis in wild vs. captive, 6253
 vascularity of enamel organ, 5906
 of Western Hemisphere, paleontology, book, 5249
Mammary gland. (See also *Lactation; Milk.*)
 ablation, effect on glycemia and glyco-gen stores after parturition, guinea pig, 3963
 on tumor production, mice, 7832
 assay of mammary pituitary factor, 9335
 autotransplantation, resulting in meta-stasizing cancer, 16856
 galactophore sinus, milk concretions in, 8317
 growth, estrogen as affecting by inunction, man, 7546
 growth and function, rabbit, 9417
 gynecomastia, in monkey, 11100
 testosterone as affecting, 14979
 histology, estrogens, as affecting, 16930
 hydatid disease in, 10482
 as influenced by:
 androgens, 3890, 9634, 11100, 12996
 desoxycorticosterone, ♂ mice, 12996
 estrogens, 2118, 11100, 12996
 pituitary hormones and, 3826, 5864
 hexoestrol, guinea pig, 16596
 inheritance, swine, 12556
 lipids in, pregnancy and prolactin as affecting, rabbit, 14688
 milk produced by urine from pregnant cattle, castrate rabbit, 16617
 nodular panniculitis, 14875
 permeability to polonium, 5427
 protein metabolism in lactation, goat, 14684
 tularemia in human, 9967
 tumors, adenocarcinomas, origin of hydrocarbon induced, 14877
 carcinoma, in A stock mice, 9583
 in cat, 4204
 culture, rats, 5807
 cystic cerebral metastasis, 7858
 incidence, mice, 14876
 as influenced by:
 carcinogens, mice, 584
 gestation, mice, 583
 oophorectomy and hypophysis, 4219
 testosterone, mice, 9590
 in ♂, 4192
 metastatic calcification, 2354
 relation to non-suckling, rats, 16834
 spinocellular epidermoid, 579
 structure, metastases and, 7822
 surgery and irradiation, 4183
 tar wart and, mouse, 7823
 x-ray therapy, 14887
 complex, malignant, 9598
 fibroadenoma, folliculin-treated, hist., 4229
 incidence in rats with pituitary adenomata, 614
 theelin as affecting, rats, 597
 induced by methylcholanthrene, mice, 11300
 by oestrone, ♂ mice, 7857
 by thiorotast, 16851
 as influenced by:
 foster nursing, mice, 16832
 heptyldehyde, mice, 16881
 salicylate and, 2374
 ox bile and estrin, 16885
 "influences" in development, mice, 16837
 inheritance, 598, 13203
 metastasis to heart, 13230
 pedigree relationship, mice, 16838
 plasma cell granuloma, amyloidophilic, 11296
 radiotherapy, 9593
 transplanted, effect on endocrine organs, 16857
 udder, avian tubercle bacillus infection in goat, 1014
 milk secretion, book, 5667
 pendulous, improvements in Sahiwal cattle, 15105
 site of fat synthesis in, 2162
 staphylococci, characters and etiol. relations, 17393
 trimethylamine oxide diffusion from, 13664
Mammillaria (p.1866³) *insularis*, 2862
Mammitis, contagious. (See *Streptococcus mastitidis*.)
Mammut (p.1883³) *americanum* (Pl), from Tennessee cave, 12443
Man. (See also *Anthropology; Anthropometry; Blood groups; Body; Craniometry.*)
 albumin, serol. differentiation, 8135
 anatomical structure, mechanical factors and principles in evolution of patterns, book, 11380
 artifacts of microlithic industry in Europe, 9719
 behavior, biology, 10873
 holism supported by, 10672
 biology, contributions of laboratory rodents to, 8882
 coracoid process, characteristics, 17025
 cytogenetics, review, 8020
 dispersal of weeds by, 1186
 ecological types, 5365
 ecology, book, 12565
 epidermis, mitotic rhythm, 57
 evolution. (See *Evolution*.)
 fossil, crania and long bones from East Africa, 9716
 cranial fragments in East Africa, affinities, 9755
 cranial and skeletal remains, in collections, Australia, 9757
 in Palestine, racial affinities, 17029
 racial affinities of Steinheim skull, 9718
 of Stetten skulls, 9734
 skeletal remains, in cave at Dietersberg, 9748
 of Ituri pygmy, anthropometry, 9721
 near Lonetal, 9756
 of Magdalenian, France, 9727
 Swanscombe, affinities, 17024
 growth. (See *Growth, human*.)
 heredity and education, 1795
 inheritance. (See also *Twins; Births, multiple*.)
 of ability and personality, 9735
 of absence of thumb nails, 7164
 of acrocephalosyndactyly, 14376
 of agglutinogens, 2596
 of alexia, 1791
 analysis of pedigrees bearing on genetics of hermaphroditism, 5354
 of arthritis, heredofamilial, 1789
 of blood groups. (See also *Blood groups*.)
 of bone ossification, 16211
 of brachymetapody, 8965
 of broad and long heads, 9731
 of bronchiectasis, 12560
 of cerebral patterns, 9733
 of Charcot-Marie-Tooth muscular atrophy, 10742
 congenital cataract in 6 of 8 sibs, 1792
 of dystrophia myotonica, 8963
 of ectodermal dysplasia, 16209
 of elliptical erythrocytosis, 7933
 of endothelial dystrophy, 14378
 of eye, 7162
 familial incidence of stammering, 12561
 familial susceptibility to stillbirths, 14375
Man (continued)
 inheritance (continued)
 father-child physical resemblance, formula for, 8015, 8019
 feeble-mindedness, analysis of 487 children, 3475
 of growth in infants, 559
 of hemophilia, 1788, 796, 1797
 hereditary structure of populations, theory of heredity and, 5356
 hollow chest, 10745
 of hypertelorism, 1785
 inferiority of descendants of alcoholics, 5351
 of intelligence and character, 1786
 of Laurence-Moon-Biedl syndrome, 13196
 law for prevention of offspring with poor mental heredity, 8471
 of leprosy, 10021
 of malformation of vertebral bodies, 1790
 mechanized exhibit, 16208
 of mental qualities, 9729
 of monochromasy, 3472
 of morbidity in isolated rural community, 3473
 of myopia, consanguinity of parents and, 3470
 of nerve disease, clinical-genealogical contribution, 5357
 of parental instinct, 16212
 pedigree of color-blindness and hemophilia, 1796, 1797
 piebald family, 793
 present trends in study, 7163
 protective protease reaction and, 5444
 of psychopathies and criminality, 5359
 sex ratio and twin producing kindreds, 8964
 of short finger tendons, 12558
 of skin spotting, 8966
 of structural variations of iris, 15049
 of syndactylism, 3469
 tests for sex linkage in quantitative characters, 16210
 of thenar pattern, 8028
 Thomsen's 4-gene-hypothesis, 1802
 of total color blindness, 14377
 of transposed viscera, 7161
 of twinning, 10744
 in twins, 1798
 value of kindred file for study of defectives, 1800
 longevity. (See under *Longevity*.)
 middle meningeal artery pattern of branching in early and recent, 2465
 Neanderthal frontal sinuses in, 5932
 Nordic and Mediterranean types, differential diagnosis of crania, 9720
 origin, in late diluvium, 17032
 phylogenetic relationship of anthropoids, 9717
 population problems in America, 3474
 postural sway, sex and age as affecting, 8021
 psychology and education, book, 12474
 races, Albanians, body measurements, 5937
 Aleutian mummies, blood groups, 8011
 American Indians, Andean, relation of nutrition to development, 13318
 blood groups, 15053
 craniometry, 2464
 Navajo, of New Mexico and Arizona, food, 16453
 Pueblo, vital statistics, 15343
 antigenic specificity, 11563
 Australian aboriginal, brain of ♀, 17030
 pathol. changes in bones, 4375
 Australians, height, wt., and growth of pre-school children, 4374
 Australoid in California, 5923
 Bantu, of S. Africa, photographic studies, 9728
 Bengali, body measurements in relation to blood sugar, 17010
 head hair whorl, 5921
 blood groups, 13322
 Bulgarians, physical ethnic composition and blood groups, 17027
 categories, critique, 5942
 Chinese, ancylostomiasis in, Canada, 12257
 Clonorchis in, Cuba, 6720
 fertility of ♀♀, 418
 Chinese-Mulatto crosses, physical characteristics, 9738

SUBJECT INDEX

Man-Markea

Man (continued)
 races (continued)
 Chinese-Whites crosses, physical heredity, 5352
 classification, blood groups and, 8018
 Skerlj's, 17012, 17031
 comparison of Floribad with Rhodesian and European skulls, 5924
 degeneration in Germany, 7165
 differences in facial measurements, 17006
 Egyptians, skulls, interparietal groove in, 724
 Eskimo, dental caries vs. diet, 15330
 Greenland, blood groups (MN-types), 17228
 physical anthropology, 11440
 skeletons from old Greenland graves, 2455
 Europeans, of Calcutta, blood types, 11567
 lid fold types in, 9722
 facial types in Africa, 9726
 fertility differentials in U. S., 3486
 fingernail types, 11438
 Germans, anthropology, 9730, 9744
 Dinaric characteristics of Bavarians, 5929
 genetic surveys of population, 1799
 of Lower Saxony, anthropology, 9742
 physiology, bibliography, 13320
 progressive genital growth, 5925
 Thirty Year War as affecting, 9739
 growth differences in infants, in Batavia, 4177
 Gypsies as social problem, Germany, 8031
 Hindus, urine comp., 410
 of Hungary, analysis, 5944
 eye and hair color, 8025
 hybridization in S. Africa, 5927
 incidence of coronary occlusion, 16733
 Indians, anthropology, 9751
 basal metabolism, 5535
 blood group distr. in, 5934
 blood typing, 11567
 measurement of pelvis, 4372
 red cell diameter, 4320
 Indians and Europeans, basal metabolism, S. India, 285
 growth curves of children, 9750
 Japanese, metabolism of American born, 12793
 physiology survey, 13319
 racial analysis, 5928
 Javanese, body types in schizophrenic Sundanese, 720
 Jewish, cancer incidence, 9599
 Malayan variety, 5935
 natives of Iraq, erythrocyte count, 5883
 natural resistance to *Pl. ovale*, 14190
 negro, angina pectoris in, 13134
 epidemiology and medical care, in Arkansas delta area, 11716
 historical foundation in America, 17017
 skin diseases, Africa, 12256
 South African, corpus callosum and related structures, structure, 2462
 struggle for survival in U.S.A., 6210
 tuberculosis incidence in schools vs. population, 978
 negro and white, helminth incidence, 6742, 6754
 hematoencephalic barrier in children, 12643
 hookworm incidence, 5093
 physical heredity, 5352
 pinworm incidence, 5089
 pyramidalis muscle in, size and occurrence, 15052
 regional anatomy of inferior and superior lumbar space, 8010
 spleen weight vs. body wt., 5891
 nose, post-natal development, 4373
 occurrence of Mongolian eye fold, Asia, 9740
 origin, 3418
 and political questions in Bulgaria, 17005
 reallocation of genetic factors in, periodicity, 17008
 Rehobother hybrids, age changes in faces, 8016
 in relation to blood pressure and body constitution, 5943
 Serbians, anthropology, 9749
 serological detn., 2535

Man (continued)
 races (continued)
 serum, biochemical differences in, 8027
 Silesians, analysis of population, 5940
 anthropology, 9736
 types, 8029
 skin pigment and, 15030
 S. African, hyoid bone, 9752
 Spaniards, *Taenia* infection rate, Cuba, 6720
 Swedes, growth of middle class girls, taste variations in, 2463
 Tipteren, physical anthropology, 9462
 Turks, nomadic, blood groups and racial relations, 937
 Viennese, blood groups, 13317
 of world, critique, 5936, 5939, 5941
 relation to the cosmos, book, 14323
 senility, causes and characters, 8884
 skeletal remains, from ancient Greenland graves, 2455
 of ♀ Ituri pygmy, measurements, 9721
 of Magdalenian from cave near Cheix, France, 9727
 social behavior, compared with ants, 8871
 social welfare and advancement, genetics and eugenics as affecting, 9407
 statistics of biochem. variables, 10946
 taurodontism in, 11439
 trepanation in early Bronze Age, 11434
 types in middle Paleolithic, 17018
Manacus vittellus, courtship, 1674
 Mandarin. (See under *Orange*.)
 Mandelic acid, as urinary antiseptic, 15534
 Mandelic nitrile, effect on pelage of rats, 13145
Mandevilla (p.1867), n. spp., 11900
 Mandible(s). (See *Jaws*; and under *Bone*.)
 Mandrake. (See *Podophyllum*.)
 Manganese, antianemic effect, 14512
 assimilation and storage, chick, 7450
 as catalyst, for tubercle bacillus, 10090
 deficiency, in diet of hen, 2696
 effect on
 bone development, chick, 9165
 eggshell quality, 11511
 growth, tapeworm-infested chickens, 17898
 vegetables, in greenhouse soils, 2992
 in peas, 8156, 14070
 review, 9163
 rôle in pea marsh spot, 8169, 15873
 deficiency disease, in *Citrus* spp., 8618
 of grapefruit, 8620
 detn., for biological materials, 1941
 effect on:
 growth, of *Chilomonas*, 12643
 diatoms, 12077
 growth and cracking of tomato fruits, 6515
 N assimilation, wheat roots, 12098
 phosphatase activity, 3567
 plant respiration, kinetics, 15759
 as essential element, for tomatoes, 13972
 in feedstuffs and ores, relation to poultry, 6024
 intake by spruce plants, 10264
 manganous mercuric iodide, in malaria therapy, 9932
 in marine zooplankton, 10792
 perosis prevention in chick by, 2695
 physiological action, 5551
 rôle in plant nutrition, method of study, 10297
 in soil fertility, 1354
 utilization in chicken, factors affecting, 14552
 vit. B₁ and, interdependence, rat, 12847
 Manganese arsenate. (See *Arsenicals*.)
 Mange. (See *Dermatoses*.)
 Mangel(s). (See also *Beets*; *Beta vulgaris*.)
 absorption of Na and K by, 17583
 fertilizers for, B deficiency as affecting, 8455
 sugars in, in different organs and times of day, 8586
 winter milk and, effect on nutritive value, 13359
Mangifera indica, bud differentiation, 17631
 fruit abscission, 6505
 Mango(s). (See also *Mangifera indica*.)
 side-grafting, new method, 11990
 Mangold(s). (See *Mangel*.)

Mangrove. (See also genera, e.g., *Rhizophora*.)
 bark yields, in Philippines, 17655
 vegetation, Brazil, 5387
 Manihot. (See also *Cassava*.)
 as food plant, Fiji, 1241
 esculenta, mosaic, symptoms and insect dissemination, 1443
 Manila hemp. (See *Musa testilis*.)
 Manioc. (See *Manihot*.)
 Mannitol, fermentation by staphylococci vs. streptococci, 6301
 metabolism, dog and rat, 8691
 resin from, 12024
 Mannose, derivatives, chem., 17668
 Manometer, in germicidal efficiency detn., 13641
 modified Warburg, for detn. of amino N, 16359
 sensitive differential type, 3605
 Mansonia, as vector of filariasis, 5094
 15968
 Mantidae (Orthoptera), p.1875¹
 Mantispidae (Neuroptera), p.1875¹
Manuocodia (p.1881*) ater, breeding in, 7022
 Manure(s). (See also *Composts*; *Fertilizers*.)
 biological sterilization of nematode larvae in, 14172
 cellulose decomp. by fungi and actinomycetes in, 11784
 cow, Clostridia in feces after silage feeding, 6291
 decomp., relation to soil, 4822
 denitrification in organic, 15407
 effect on:
 changes of comp. in hay during curing, 1209
 soil fertility in compost, 15574
 weed herbage, 16260
 green, for *Citrus*, Argentina, 6521
 effect on trees and soil, 3010
 effect on nitrification in citrus orchard soils, 17442
 on wheat take-all disease, 1419
 for grapes in Brazil, *Medicago lupulina* as, 11975
 legumes for, West Indies, 1207
 for pecans, southern U. S. A., 3004
 for potatoes, 4846, 11950
 for rice, Ceylon, 13827
 nutrient value, straw and peat as affecting, 15544
 organic, nitrates in, quantitative detn., 15407
 for pastures, 4852
 stable, 15407
 microflora and decomp. in composts, temp. as affecting, 6294
 thermophilic actinomycetes and fungi in, 4703
 use in forest nurseries, 15670
 Map(s). (See *Cartography*.)
Mapania (p.1864*), n. spp. and n. combs., 11879
 15173
 Mapharsen, in syphilis, 14826
 tolerance to, 14826
 Maple(s). (See also *Acer*.)
 blight, symptoms and etiology, 3169
 syrup, Pb in, sources and removal, 1348
 wood rot (*Daedalea unicolor*), 3169
Maranta arundinacea, culture in Italy and extraction of starch from, 1181
Marasmiellus (p.1862*), n. spp., 8403
Marasmius (p.1862*), n. spp., 8403, 11825
 limits, characters, 11825
haematocephalus, affinities, 15462
 perforans, affinities, 15462
varicosus, descriptive notes, 2801
Marathrum (p.1866*), n. sp., 6429
 Marattiaceae (Pteridophyta), p.1863¹
Maravalia (p.1862*), monograph, 6348
 from Venezuela, 6345
 tax., 1076
 Marchantiaceae (Bryophyta), p.1863¹
 Marchantiales (Bryophyta), p.1863¹
Marcusentus (p.1879*) *isidori*, ear, structure, 15001
 Mareca (p.1881*), food habits, 9064
 Margarine, oleo-, new mold spp. from, 6338
Margarinomyces (p.1863*), n. spp. from butter and oleomargarine, 6338
Margifera (p.1871*), n. sp. (Cb.), 3291
Margyricarpus (p.1865*), n. sp., 2865
Marietta (p.1876*) *javanensis*, parasite of *Laccifer*, India, 14102
 Marihuana. (See *Cannabis sativa*.)
 Marine. (See *Littoral*; *Ocean*; *Oceanography*; *Water*.)
Maritrema (p.1869*) *nettae*, n. spp., from duck, 1591
 Markea (p.1867*), n. sp., 2882

- Marmosa* (p.1882²) *cinerea*, maternal behavior, 18087
mexicana, retina, anatomy, 2425
Marmoset, eye structure, 11438
twinning, 9764
Marmota (p.1882²), new *Isodes* from, 6853
monax, (See also *Groundhog*), 5253
parasite, 5253
Marpissa muscosa, predator on *Lygaeone-matus*, 5051
Marsdenia (p.1867¹), n. sp., 2882
Marsh, (See also *Bog*; *Swamp*),
effect on *Leucocytozoon* infection in turkeys, 12273
freshwater, *Anopheles messeae* in, malaria and Ravenna, 8701
fungi, of Jura Mts., 2801
salt, buried viable seeds in relation to surface vegetation, 16261
ecology, 1823, 16253
mosquito control in rel. to conservation and flora, 12214
mosquito and sandfly control in Fla., 12318
vegetation Spitzbergen, 16256
wild life conservation, 9069
Marsileaceae (Pteridophyta), p.1863²
Marsipobranchii, p.1873²
Marsupialia (Mammalia), p.1882²
Marten(s), (See also *Mustela*),
bile comp., 9266
Martin (Aves), reared in captivity, 18057
Martin, Paul, biography, 28
Mass action law, application to biological problems, 5433
Massaria (p.186¹), n. sp., 15433
Massariopsis (p.1861⁴), n. sp., 15433
MASSALIOTHEA (Fungi) (p.1862⁴), 17500
Mast cells, (See *Leucocytes*),
Mastic reaction, (See under *Cerebrospinal fluid*, colloidal reactions),
Mastigobryum (p.1863²), spp., trans. to *Bazzania*, 8419
Mastigocladus (p.1860⁴), n. sp., 8385
thermal spp., 6335
Mastigophora (p.1868⁴), (See *Flagellata*)
Mastitis (bovine), (See also *Streptococcus* spp.),
chemotherapy, 15372
chronic streptococci vs. nonspecific, 11749
detection by milk test, catalase test-tubes for, 6226
diagnosis, chemical method, 4684
culture methods compared, 11781
rapid method, 11726
diagnostic and control methods, 8242
differential staining of udder tissue for, 8323
effect on milk solids-not-fat, 4411
forms and etiological relations, 11749
human carriers, 6180
incidence, milk comp. and, 4673
stable conditions and, 4674
inclusion bodies in, tissue culture, 15254
as milk sanitation problem, 17413
nonspecific form, 6244
Pasturella-induced, 2700
pathology and virus (?) etiology of nonspecific form, 6244
Pseudomonas aeruginosa in, 6227
review, 8225
staphylococci relations to, 17893
streptococci associated, agglutinability, 8242
alpha-hemolytic, serol. differentiation and relationships, 11797
double-zone-beta-hemolytic, 6180
human beta hemolytic, 1016
in milk, Hotis test for, 15404
non-hemolytic, 17331, 17408
sulfanilamide therapy, 15371
test (milk) for, 1013, 6237
tuberculous, 8164
type-specific antibodies in, 4540
virus isolated from, 15254
† *Mastixia* (p.1866⁴), of Oligocene, Germany, 4724
Mastodon (s) (p.1883²), of Indiana, 12450
Mastodontidae (Mammalia), p.1883²
Mastomys (p.1883²) *colberti* (Tr.), 10666
Mastotermes darwiniensis, bacterial symbionts, site and life history, 1635
Maternity, blood groups in detn., book, 13520
Mathematics, (See also *Biometry*),
in biology, 12462
calculus of variations and logistic curve, 10750
Mathiola, mosaic disease, general account, 4981
Sclerotinia blight, 13115, 15890
Mating behavior, (See also *Copulation*),
in *Anolis*, 3984
in *Drosophila*, 3982
emotional and exploratory, relation to wt. of endocrines, rat., 3979
in foxes, 5240
in guinea pig, 7604
as influenced by:
brain lesions, 13084
pregnancy urine, dog, 9332
removal of neocortex, rat., 14679
in *Nereis*, 9451
in night heron, 7019
in *Paramoecium*, 7143
technic for study, rat., 2172
Matricaria chamomilla, extract from, effect on lesions caused by war gas, 6552
oil, azulene as anti-inflammatory component, 16781
Matrocliny, in hybrid, *Mollisia* "formosa", 5846
MATTIOLOMYCES (Fungi) (p.1862²), 8390
Maturation, (See *Ripening*),
Maturation division, (See *Meiosis*),
Maturity, (See *Sex*, maturity),
MAURITACANTHA (Diplop.) (p.1873⁴), 12319
May beetles, (See also *Phyllophaga*),
biology and control, 14127
May-flies, (See *Ephemera*),
Mayorella (p.1868²), crystalline inclusions, 3254
palestinensis, reproduction as influenced by crowding, 5104
Maytenus (p.1860⁴), n. spp., 4785, 15504
Maze habit, (See under *Learning*),
Meadow(s), (See also *Grassland*; *Pasture*; *Steppe*),
renovation, fertilizers for, Canada, 8465
Meadowlark, western, *Giardia* in, 6773
Meal, (See *Cottonseed meal*; *Meat*, meal; etc.),
Meal moth, (See *Ephestia kuehniella*),
Indian, (See also *Plodia interpunctella*),
Mealworms, epinephrin and sympathin in, 9384
yellow, (See *Tenebrio molitor*),
Mealy-bug(s), (See also *Pseudococcus*),
biol. control, 3209
grass, (See *Antonia indica*),
Means, comparison in field expts., 7171
differences, in samples with possibly unequal variances, significance tests, 12616
estimation, cumulative graphs for, 7173
potentiated and combinatorial, 7170
theory of, 7167
Measles, complicated pneumonia, chemotherapy, 17255
complications, chemotherapy, 11588
statistical, epidemiol. and immunol. study, 15308
convalescent-serum therapy, 11546
effect on childhood behavior, 11272
encephalomyelitis after, path., 16944
epidemic, 4666
German, transmission (artificial) tests unsuccessful, 6199
historical, epidemiol. and etiol. study, 17360
immunization, by adult, convalescent and immune sera, statistics, 17152
incidence, age and familial, 8312
inter-ward vs. inter-year incidence, 8312
mortality statistics, 15353
serotherapy, 4666
sulfanilamide therapy, 11573
transmission to monkey, 8216
virus, isolation and culture trials, review, 8216
virus-pneumonia in infants after, 11614
Meat, addition to milk-and-wheat diet, effects, rats, 2006
bacon, bacteria, relations to curing, 11763
carcass characters, nature and variability, 15097
fat deposition in, factors affecting, 9797
protein intake affecting, 15102
beef, breed comparison, 6000
carcass grades vs. weight gain, factors affecting, 774
effect on pernicious anemia, 5843
on regeneration of blood albumin, 1899
grading, factors applied in, 15098
quality, from range cattle, 15099
Clostridium botulinum in, sources and control, 975
consumption in Australia, 9168
differentiation of raw and cooked, by koktospecific antisera, 4506
drip formation in frozen, pH and, 1031
extract, for test meal, 3767
frozen, study, 10872
inspection, bacteriol. studies, methods compared, 4682
meal, in poultry ration, effect on egg production, 6019
as protein supplement for milk cows on pasture, 17084
tankage, as cattle feed, 18355
packing plants, prevention of bacterial contamination and spoilage in, 15395
pantothenic acid in, 16529
pork, bacteriol. inspection, 2705
cold storage of legs, for ham manufacture, 10034
color, desiccation as affecting, 11492
conformation, significance of variations in, 17074
cured, salt content, 6265
-fat, oxidation susceptibility, 10050
lipoxidase, 10049
poultry, body measurements and 15119
fat, various cereals as affecting, 15120, 15121
grading, factors applied in, 15098
market quality and consumer value, factors affecting, 17103
protein in ration as affecting, 793
surface drying when frozen, 17093
riboflavin in, 9225
sampling variations for press fluid studies of roasts, 2719
sausage, food poisoning by anaerobic bacillus in, 13818
slimy, *Debaryomyces* inducing, 2728
tainting by volatile products of oranges, 10042
vit. B, in, 7481
Mechanism, (See also *Vitalism*),
in biology, critique, 1665
relation to Marxism, 5256
as explanation of life phenomena, book, 10677
Mecohyl, effect on:
bile secretion, 9268, 11222
blood pressure, 13178
gastric secretion, 2326, 11035
heart, 11183, 14655
hypertension, iontophoresis admin., man, 14829
iris muscle, 4045
iris sphincter, 13155
liver sugar and K output, turtle, 361
liver vol. and outflow, turtle, 3766
retinal vessels, 14773
thyrotoxic heart, 405
heart block by, 5744
in therapy of thrombophlebitis, 11200
Mecodium (p.1864⁴), n. sp., 8421
Mecodrin, effect on central nervous system, 582
Meconium, (See *Feces*),
Mecoptera, p.1876⁴
Media, (See *Culture media*),
Mediastinum, emphysema, as complication of artificial pneumoperitoneum, 12918
spontaneous, review, 12923
tumors, intracranial pressure in, 16407
Medicago, (See also *Alfalfa*),
inheritance of flower color, 8938
Rhizobium specificity among spp., 10069
lupulina, as green manure, for grapes, 11975
media, improvement by "strain building", 10732
sativa, water utilization, factors influencing, 1203
Medical Schools, history, Johns Hopkins, 15
Medical students, allergy and, 15147
intestinal parasites, New Orleans, 1570
microbiology textbook for, 15338
pulmonary tuberculosis incidence in, 11710
Medicaments, thermolabile, sterilization in presence of bactericides, 8283
Medicinal plant(s), (See also under specific plants, e.g. *Atropa*),
action, reasons for, 1325
adulterant, use of palisade ratio in detecting, 8564
ash analyses, methods, 8562
of East Africa, 10283
extracts, vacuum drying, 1314
fertilizers for, 1840, 6555
grown in Ceylon, 1338
of India, *Euphorbia* spp., 1317
Ipomoea pes-caprae as, 1322, 10289
microscopic, manual, 15690
volatile oil in detn., 1329
of western U.S.A., used by Kiowa Indians, 12475

- Medicine, bacteriology in, textbook, 15427
and biology, book, 14822
cyclotron applications in, 7319
dental, principles, book, 9700
education in, history, 16
endocrine therapy in, 12988
forensic, blood groups in, 17230
detn. in newborn, 13522, 13524
in detn. of parentage, book, 13520
problems in diabetic hypoglycemia, 14954
serology as aid in, 6117
history, in America, 16290
in Scotland, 5274
in U. S., 22
industrial, organization, 14992
internal, in dental practice, book, 4303
motion pictures in, apparatus and technique, 12464
photography in, equipment, 12467
preventive, development, 8289
limitations in, 11679
programs, appraisal, 15348
textbook, 15325
principles and application, book, 9902
problem of chance in, 14321
research clearing house in, 9073
use of short waves in, 9105
vocabulary, in foreign languages, 13195
work by Japanese in China, 17375
Medinal. (See *Barbital*.)
Medinilla (p.1866³), tax., 6431, 15505
Mediterranean fever. (See *Brucella melitensis*; *Br. abortus*.)
Medulla oblongata. (See under *Brain*.)
Medullary ray(s). (See *Vascular system*, plant; *Wood*; *Xylem*; under plant parts, e.g., *Root*, *Stem*, etc.)
Medullosa (p.1864³) *dististella*, 10098
Megaceryle (p.1881⁴) *alcyon*, food of nestlings, 170
gastric digestion of young and adults, 10652
Megachile (p.1878⁹), tax., 6926, 14265
Megachyrtum (p.1861³), classification, 17490
Megacrez (p.1881²), n. subsp. in, 7022
Megacustis (p.1870³), synonymy, 15990
Megachthyidae (Pisces), p.1879¹
Megalakrus (p.1880²), n. sp., 6979
Megaloblast. (See under *Erythrocyte*.)
Megalomma (p.1871³), syn., 17962
Megalonyx milleri (Pl.), 1656
Megamelus (p.1875²) *prosperina*, on taro, reappearance in Hawaii, 3182
Megapodiidae (Aves), p.1881²
nesting site and eggs, Pelew Islands, 8351
Megapodius (p.1881²), n. ssp., 7014
Megaptera (p.1883³) *nodosa*, reproduction and life hist., 1657
Megapus (p.1874³), new var., 1618
Megasporangium. (See *Ovule*.)
Megaspore(s). (See *Embryo sac*; *Sporogenesis*.)
Megasporogenesis. (See *Embryo sac*; *Microsporogenesis*; *Meiosis*; *Sporogenesis*.)
Megastigmus (p.1878³), morph., phyl., 1632
Megatera nodosa, identity of Arctic and Antarctic form, 1657
Megathyridae (Lepidoptera), p.1876⁴
Megathymus (p.1876⁴), n. sp., 6932
Megisthamus (p.1874⁴), n. spp., and key, 3316
Meier, Fred Campbell, biography, 1686
Meinertophylus (p.1873⁴), n. sp., 6832
Meinicke clarification test, in Hodgkin's disease, 13248
for tuberculosis, 874
Meinicke turbidity and clarification reactions. (See also under *Syphilis*.)
Meiosis. (See also *Chromosomes*; *Embryo sac*; *Mitosis*; *Oogenesis*; *Nucleus*; *Pollen*; *Spermatogenesis*.)
in *Alydus calcaratus*, 5299
in *Artemisia* spores, 4808
in asynaptic *Pisum sativum*, 1704
in bacteria, 11789
behavior of chromatids broken in, *Zea*, 10717
in *Curtisia* and *Bedelloura*, 60
in *Dasyurus viverrinus*, 1719
in diploids and triploids, *Lilium tigrinum*, 7093
in Duke cherries and their derivatives, 16153
in genus *Cicer*, 12505
in heat-induced haploid, *Secale*, 14348
major spirals in diakinesis in, *Trillium*, oogenesis, *Neuroterus baccarum*, 14350
in parthenogenetic plants, 8445
in polyploids induced by colchicine, *Petunia*, 14347
in red alga, 13722
in *Saccharomyces* (yeast), 17501
in *Schizospora crustipes*, 16162
in *Spiloprytus extrematus*, 16164
temp. as affecting, 1699, 10713, 12501
in tissue cultures treated with carcinogens, 16346
in triploid *Impatiens*, 45
x-rays and cold as affecting, *Antirrhinum majus*, 12501
Melaleuca leucadendron, in Java, 4791
Melampsora (p.1862²), Arctic spp., shortened life cycle, 8396
nuclei, structure and behavior, 17494
farlowii, on *Tsuga*, pathogenicity and control, 12153
Melamporaceae (Fungi), p.1862³
Melanconiaceae (Fungi), p.1862⁴
Melanconiales (Fungi), p.1862⁴
Melandrium (p.1865²) *album*, behavior of so-called sex chromosomes, 10716
dioicum, sex mechanism in polyploids, 16191
Melandryidae (Coleoptera), p.1876²
Melania (p.1872¹), n. spp., 10565, 16009
Melaniidae (Mollusca), p.1872¹
Melanin. (See under *Pigments*.)
Melanism, in grass frog, 10631
inheritance, pheasant, 7136
in mouse, 12451
in snowshoe hare, need of study, 7037
in Triton, 10630
Melanobatus (p.1865⁴), n. syn., 1158
Melanobucco bidentatus, new cestode in, 12300A, 15992
Melanodiscus (p.1866²), n. spp., 2843
MELANODOCHIUM (Fungi) (p.1863⁴) australiense, on *Tecoma*, 8407
Melanoferro reaction, Henry's, for malaria, 4547
Melanogrammus (p.1879⁴). (See *Gadus aeglefinus*; *Haddock*.)
aeglefinus, spawning and spawning grounds, 5410
MELANOPELTA (Fungi) (p.1861⁴), 15453
Melanoplus (p.1875¹), outbreaks, in Iowa, 1493
susceptibility to stomach poisons, 12237
bivittatus, chromaffin nerve cell, nature, 5970
differentialis, crop preference of, 17875
development, changes in properties of activators of protyrosinase during, 17062
drugs affecting heart, 4115
eggs, as influenced by ultra-violet, 1904
O consumption of normal and blocked embryos, temp. coefficients, 13342
O consumption, pyocyanin and certain inhibitors as affecting, 17063
mexicanus, migration of, 14122
Melanopsacus (p.1876³), n. sp., 8781
Melanopsamma (p.1861⁴), n. sp., 15453
Melanospora (p.1861⁴) *destruens*, effect of biotin and aneurin on, 4766
perithecia formation, carbohydrates as affecting, 15761
MELANOSTIGMA (Fungi) (p.1861⁴), 15453
Melanostoma (p.1877⁴), African spp., keys, 6897
Melanotaenidae (Pisces), p.1879⁴
Melanoxanthus (p.1876³), n. sp., 8766
Melasidae (Coleoptera), p.1876²
Melasoma (p.1876²) *populi*, oenocytes and fat body, rôle during development, 13346
Melastiza (p.1862⁴) *miniata*, spore characters, 11815
Melastoma (p.1866³), n. spp., 15505
Melastomataceae (Dicotyledones), p.1866³
Meleagris. (See also *Turkey*.)
gallopavo, inheritance of time of sexual maturity, 14366
Meliaceae (Dicotyledones), p.1866¹
Melicope (p.1866¹), n. sp., 4783
Melilotus. (See also *Sweet clover*.)
alba, *Ascochyta caulicola* on, 1422
fungus parasites of seed, 17750
host of sugar beet nematodes, 17771
improvement by "strain building", 10732
inheritance of seed color, 16169
root rot resistance, 17816
seed viability, storage conditions as affecting, 15726
Melinaea lilis ssp. *extra*, 12393
Melinis (p.1864³), n. spp., 15488
minutiflora, growth characters and forage value, Argentina, 15558
Melioidosis, bronchostenosis following, 11631
Meliola (p.1861³), n. spp., 17487
Meliosma (p.1866²), tax., 15505, 17477
Meliphaga (p.1882²) *fusca*, from S. Australia, 14294
Melittara (p.1877²) *parabates*, transf. to *Alberada*, 8792
Melithreptidae (Aves), p.1882³
Melitonoma (p.1876³) *discoidealis*, 14249
Melicanthus (p.1876³) *conradti* v. *lateniger*, 14249
Melioidae (Coleoptera), p.1876¹
Melolontha (p.1876²), *Beauveria* attacking, hibernation of larvae, and biol. control, 15906
L. H. and control, 14127, 14135
hippocastani, life hist. and control, 12201
melolontha, larvae, control, 15900
Melomys littoralis, as field rat, control in sugar-cane areas, 12092
Melon(s). (See under genera, e.g., *Citrus*, *Cucumis*, and under common names, e.g., *Muskmelon*, *Watermelon*.)
Melophagus ovinus, on sheep, Sweden, 5091
MELORMENIS (Hom.) (p.1875²), n. name for *Ormenis*, 8785
Melospiza (p.1882⁴) *georgiana*, *Gardia* in, 8778
lincolni lincolni, *Haemoproetus* from, 3257
melodia, behavior of ♂♂, book, 8840
habits, 18075
Melyridae (Coleoptera), p.1876¹
Membracidae (Homoptera), p.1875⁴
Membrane(s). (See also *Cell wall*; *Film*; *Osmosis*; *Permeability*.)
albuminous, permeability, tannin as affecting, 12647
animal, diffusibility of CO₂-O₂ through, 12650
formation of lipid-aqueous interfaces in tissues, 5428, 16302
liquid, movement of water from conc. to dilute solns. through, 174
monolayer, lipid, complex formation in, 5436
permeability to dye, factors affecting, onion epidermis, 3068
plant permeability, pore theory, 18991
potentials, organic electrolytes and non-electrolytes as affecting, 9079
polarization and, frog-skin, 16300
reactions, address, 16305
tissue, diffusion forces and, 10843
permeability to dyes, 10835
Memnonia (p.1875⁴) *acuta*, 16038
Memory. (See also *Behavior*; *Learning*.)
delayed reaction and, rat, 7622, 9444
muscle tension as affecting, 14693
nature, 1668
MENDANA (Moll.) (p.1872³), n. spp., 5114
Mendelism. (See *Heredity*.)
Mendoncia (p.1867²), n. spp., 2885, 6437
Menidia menidia, host of *Stephanostomum*, 15986
Meninges. (See also *Cerebrospinal fluid*; *Hemato-encephalic barrier*; *Meningitis*.)
ependyma, thorotrast as affecting, 16891
nerve cells in substantia nigra, pigment in, primates, 15017
pia-arachnoid, as poliomyelitis virus barrier, 15230
Meningitis, associated with Weil's disease, 13608
atypical gram-negative cocci causing, 9971
Bact. monocytogenes causing, 8244
Bact. paratyphosum-B causing in infant, 9964
cerebrospinal, virus, agar-slant tissue culture, 4586
chorio. (See *Choriomeningitis*.)
epidemic cerebrospinal. (See also *Neisseria intracellulalis*.)
bacteriophage therapy, 2626
chemotherapy, 11576, 11607, 17243
diagnostic value of gastric mucin, 11672
epidemiology, 8163
prophylaxis by local protection, 9850
serotherapy, 8163
susceptibility, tribal differences, 11576
gonococci, incidence and diagnosis, 4632
Hemophilus influenzae-induced, vaccine for, 6026

- Meningitis (continued)
 meningococcic, bacteremic, in pregnancy,17309
 vaccination for,4468
 pneumococcic, chemotherapy,13537
 immunization by type-III antiserum,17265, 17272
 repair, histopath., rats,13537
 sulfanilamide, serum and combined therapy of type-I,13540
 purulent, *Hemophilus influenzae* causing,4619
Lactobacillus causing,17303
Torula histolytica causing,8247
 traumatic, *Pasteurella* (new) from, 13605
 tubercular, path., vs. tuberculous, 7863
 Meningococemia, in pregnancy,17309
 Meningococci. (See *Neisseria intracellularts*.)
 Meningo-encephalitis, in exptl. trypanosomiasis,1542
 Meningomyelitis, canine, case reports,11754
 Menispermaceae (Dicotyledones), p.1865³
 Menopause, estrogens in blood after,14645
 as influenced by:
 estilbin MCO,16928
 estradiol,9643
 testosterone,9648
 pregnenolone as affecting uterus after,9366
 specific dynamic action test in,3871
 Menstruation. (See also *Estrus*; *Menopause*; *Ovulation*; *Pregnancy*; etc.)
 amenorrhea, classification of types by vaginal smear,12990
 gonadotropic hormones as affecting,12990
 blood platelet count and,423
 disorders, estrogen as affecting,4276
 and obesity, build groups and, 9630
 thyroid extract as affecting,9642
 sex hormones and,9645
 dysfunction, gonadotrophic hormone as affecting,16930
 dysmenorrhea, estrogens in blood and,4273
 effect on fibroadenomatosis mammae, hist.,4229
 on lipoids of genital tract, monkey,12643
 endometrial changes,9647
 in gorilla,5672
 as influenced by:
 androgens,3824
 corpus luteum extracts and Na citrate-MgCl₂,14678
 sex hormones,11405
 testosterone,9354, 14970, 14971
 in monkeys,5232, 5669
 pregnandiol excretion during,5648
 review,14639
 serum cholesterol during, man,7596
 urine, effect on uterine motility, rabbit,9653
 Mensuration (forest). (See *Forest, mensuration*.)
 Mental deficiencies. (See *Feeble-mindedness*; *Idiocy*.)
 Mental diseases and disorders. (See *Psychoses*.)
 Mental work. (See *Work, mental*.)
 Mentality. (See *Intelligence*.)
Mentha (p.1867), chromosome number,1701
 Menthaceae (Dicotyledones), p.1867¹
 Menthol, isomers and, comparison, 12643
Mentzelia (p.1866²), n. syn.,1158
 selenium-tolerant spp.,10179
Menura (p.1881⁴), book,16084
 Menuridae (Aves), p.1881⁴
Mephitis (p.1883²). (See also *Skunk*.)
 census in Iowa,10824
hudsonica, feeding habits of,5240
m. nigra, winter studies of, 14312, 14424
 Merbaphen, effect on antidiuretic hormone of rat pituitary,14632
 in trichinosis therapy,8713
 Mercapto group. (See *Sulphydryl group*.)
 Mercapturic acid, synthesis in animals,3680, 9191
 Mercresin, as skin antiseptic,13139
 Mercurochrome, in canary-pox therapy,15374
 as skin antiseptic,13139
 Mercury, compounds, antiseptic action,18178
 diuretic action,16753
 effect on spirochetes, factors affecting,13178
 organic, efficiency as oral antiseptic,2104
 spirochetocidal action, sulphydryl compounds as affecting,17245
 in syphilis therapy, comparisons,17264
 detn.,9117
 in urine,7298
 effect on hemoglobin,7375
 excretion, theophylline as affecting,516
 poisoning, release of histamine in intestine in,4101
 as soil disinfectant,10372
 chloride (HgCl₂), compounds, as skin antiseptics,13139
 disinfectant action on molds,17397
 as insecticide, for cabbage root fly,5046
 for onion fly,17882
 for onion maggot,10408
 phage extraction by,8206
 poisoning, hydroxypruvic aldehyde compounds as antidotes in,13178
 sodium formaldehyde sulfoxalate in,16761
 chloride (HgCl₂), propyl and pyridyl, as a skin antiseptic,13139
 as vermifuge, calves,1562
Meretrix meretrix, growth measurements,3706
 Merganser. (See *Mergus*.)
Mergus (p.1881²), nesting of, Denmark,5205
merganser, as carrier of fish parasites,8687
americanus, trematode parasites, Canada,1590
serrator, food habits,5424
 reared by gulls, habits,16102
Merismopoda (p.1860¹), n. sp.,8385
 Meristem(s). (See also *Cambium*; *Initials*; *Phellogen*; *Root*; *Stem*.)
 aerobic fermentation in,1394
 apical, behavior in *Chlorophyllum*,1117
 in conifers,6446
 cellular and tissue differentiation from, in shoot of seed plants,17557
 in *Lycopodium* (club moss),6374
 cytonuclear ratio, significance,17703
 formation, indole-acetic acid as affecting,8570
 intercellular space,2908
 growth and development, relation to polymerization of proteins, 1373
 relation to flower bud formation, fruit trees,2988
 responses of rootshoot primordia of apple,11928
 terminal, studies, review,17557
 Mermithidae, on *Nymphula* larvae,5039
Merodon equestris, control by vapor-heat, in bulbs,12196
 Merogony, in *Fucus* (alga),1068
 Merphenyl borate, in poliomyelitis, 920
 Merthiolate, effect on *Strep. viridans* in fibrin clot,483
 as skin antiseptic,13139
 in sterilization of T. A. B. C. vaccine,17190
 Mescal. (See *Lophophora williamsii*.)
 Mescaline, elimination, man,293
Mesembryanthemum (p.1865²) *crinitiflorum* synonymy,1126
 Mesenchyme, derivatives, lymphatic tissue as reserve,11522
 hematopoiesis in human,4317
 Mesentery(ies). (See also *Omentum*.)
 of child, *Ascaris* eggs in,1566
Mesocyclops (p.1873³), notes,8753
 as intermed. host of *Dracunculus*,3248
 Mesoderm. (See *Germ layers*.)
Mesochippus (p.1883³), causes of extinction,5081
Mesolecanium (p.1875⁴) *deltae*, habits, descr., control on citrus,17859
Mesolepis (p.1879¹), spp. segregated as *Paramesolepis*,8813
 Mesonephros. (See *Kidney*.)
Mesopodon (p.1883²) *mirus*, notes on,14312
Mesopoma (p.1879¹), † taxonomy,8813
Mesostoma (p.1869¹), tax.,8732
12300, 14207
ehrenbergii, chromosomes in,8916
 Mesozoa (p.1870⁴)
 MESSOIDES (Hom.) (p.1875³), n. sp.,8785
Metabacetus (p.1876¹), revision and n. sp.,3330
 Metabolism (general), electric potential of organism and,203
 energetic efficiency of productive processes in farm animals,7398
 formative, as essential of life,1663
 in idiopathic steatorrhea,3694
 as influenced by:
 d-arginine, dog,10973
 bone fracture, rat,9159
 diet, dog,9161
 endocrines, review,14631
 d-lysine, dog,10972
 synthetic diet with single vit. B, addition, rat,9230
 nervous and hormonal regulation, 12773
 products, distr. in body,12643
 regulatory mechanism,12776
 review,7069, 9271
 rôle in growth of infants,559
 of photoxan in,17669
 systems, diffusion forces in,183
 Metabolism (respiratory and energy, in intact animal). (For plant material see *Respiration, plant*.)
 of amphibian gastrula,753
 apparatus for measurement and analysis,3783
 and technic for fed animal for 48 hr. periods,3782
 basal, of American-born Japanese, 12793
 blood I reserve and,9154
 blood volume and,2267
 in chronic exfoliative dermatitis, 9646
 of Conn. State College students, 14526
 and cortical alpha rhythm in dysthyroidism,16934
 creatinine excretion standard, children,16826
 criteria of dependable report,5534
 detn. on disturbed patients,3604
 detn. and interpretation,12796
 of dwarf mice,4283
 in hypopituitarism, hormones as affecting,9658
 of Indian boys,5535
 of Indians and Europeans, S. India,285
 as influenced by:
 alcohol,275
 ant. pituitary extracts,9181
 arteriosclerosis,5859
 body temp., rats,3669
 carbohydrate and fat diets, man,10965
 cervical sympathetic stim., rabbits,3666
 cortin, hyperthyroid dog,390
 in thyrotoxicosis,7900
 diet, thyroid function and,4277
 lactation, cattle,287
 old age, man,16443
 O₂ lack, marine animals,3667
 pituitary, man,3887
 pituitary extracts,3878
 iodine and, dog,14625
 protein, exercise and age, rat,10964
 reading under various levels of illumination,11134
 specific metabolic principle of pituitary,5609
 testosterone,2000
 thyroid extracts,14640
14641, 14651
 thyrotropin and antagonistic agents,14615, 16621
 thyroxine,10971
 thyroxine derivatives, guinea pig,3859
 of mammals and birds, book,3663
 in menstrual disorders,9642
 O₂ consumption, as detd. by standard apparatus,12643
 during pregnancy,3973
 in purebred dogs,273
 in rheumatic fever,7507
 seasonal variations in sparrow, 5642
 technic,9185
 in tuberculous children,14871
 urine excretion and,2019
 values in adolescents and adults,14527
 calorimetry, with sugars, human direct and indirect,12643
 CO₂ as measure of standard,284
 of chicks,16472
 coefficient of energy consumption, *Tubifex*,14398
 determination. (See also *Respirometers*.)
 new methods,3771
 use of Zeiss interferometer in, 12799
 diseases, blood polypeptides in, 16411
 in earthworms,12753
 in effort syndrome,372
 in heat stroke, rabbit,5532
 in hibernating marmot,3543
 as influenced by:
 ant. pituitary extract, adrenalectomized rats,12643

SUBJECT INDEX

Metabolism—Methylcholanthrene

Metabolism (continued)

- as influenced by (continued)
 - benzedrine, man,14788
 - calcium,279
 - central nervous system depressants,7778
 - dinitrophenol and quercitrin,7773
 - drugs and temp.,16770
 - exercise,14534
 - food ingestion. (See *Specific dynamic action*.)
 - humidity, starved Japanese beetle larvae,9179
 - ingestion of phospholipid, man, 9183
 - melanophore hormone,9377
 - morphine, dog,7742
 - posture,9511
 - sucrose, galactose and exercise, 277
 - temp.,2016, 8987, 16473
 - thyroxamine,9338
 - thyroxin,16626
 - training, man,10967
 - transfusion of blood from fasting and fed dogs,9182
 - trauma, guinea pig,12795
 - ultra short waves, man,274
 - vit. C deficiency, guinea pigs, 5568
 - vit. D and hypophysectomy,16588
 - vit. intestinal helminths, type, and bibl.,1573
- of lactating goats,11471
- of larvae of *Deilephila*, temp. as affecting,12779
- mask for studies,16577
- O₂ consumption, in aerial and aquatic media, salamander,3778
- continuous recording,7362
- in fetal sheep,10962
- in heart and lung diseases,2275
- as influenced by:
 - athyroidism and hyperthyroidism, salamander,11415
 - CO, *Drosophila* pupae,3785
 - numbers per area, fish,434
 - intra-individual differences,12643
 - of larvae of *Clocon* and *Ephemera*,16469
 - of marine animals, rhythm in relation to tides,3494
 - measurement and data in *Colpidium* (Protozoa),5100
 - of *Melanoplus* during development,17063
- protein and exercise at different ages as affecting total energy,10963
- rate, alteration, effect on insulin action,14536
- respiratory quotient, of blowfly larvae,3779
- detn. at rest and during work,9133
- as influenced by:
 - autonomic nervous system, dog,5533
 - during larval and pupal development,13345
 - exercise,9495
 - fasting and refeeding,16450
 - insulin action and, in diabetes, 7896
 - interpretation,278
 - respirometer, for snails,3611
 - review,7244
 - in rickets, rat,12862
 - of ruminants,4405
 - stimulation, heat production and water metabolism during,12643
 - in voluntary hypercirculation,14770
- Metabolism (substance). (See also *Diet; Fasting; Feeds; Foods; Growth; Hunger; Inanition; Nutrition; Specific dynamic action; intermediary processes, e.g., Deamination, Glycolysis, Hydrolysis, Oxidation, Proteolysis; and body fluids, e.g., Blood, Urine.*)
- of amino acids. (See under *Amino acids; and specific amino acids, e.g., Alanine, Tyrosine.*)
- of chlorinated naphthalenes, rat,5519
- of dibenzanthracene, in lower animals,16847
- of minerals. (See under *Minerals; and specific minerals, e.g., Copper, Iron, Magnesium.*)
- of organic acids. (See under *specific organic acids, e.g., Citric acid, Oxalic acid, Pyruvic acid.*)
- porphyrins as affecting,3657
- of proteins. (See under *Proteins; Proteolysis; and specific proteins, e.g., Casein.*)
- protistan, autotrophic, *Chilomonas*, 3256
- of sugars. (See under *Sugars; specific sugars, e.g., Glucose; Glycolysis.*)
- of water. (See *Water balance.*)

Metabolism (tissue and cellular). (See also *Oxidation.*)

- diffusion forces in,183
- discussion,16329
- evaluation of wet and dry weight bases for expression,9180
- O₂ detn., dropping Hg electrode for,5499
- periodicity in,182
- radiosensitivity of cells and,12780
- yeast extracts as affecting,1388
- animal. (See also under *specific tissues and organs, e.g., Brain, Heart, Kidney, Liver, Muscle, Nerve, Tissue cultures, Tumors.*)
- of bone marrow in serum,12643
- of developing chick embryo,2116
- of frogs during development,366
- as influenced by:
 - autonomic drugs, salivary glands,7748
 - bacterial toxins,288
 - barbiturates, rat,13189
 - biochemical substances,12822
 - diselenoiodoacetic acid,13178
 - epinephrine, cat,9540
 - intact leg of cat,12843
 - pH changes,16467
 - iodoacetate, frogskin,9078
 - iodoacetic acid,12643, 12812
 - media,16468
 - oxalic acid and bile, 10968, 10969
 - pyrophosphate,7408
 - sex hormones,12961, 12962
 - spermine,14507
 - thyroglobulin and thyroxin in vitro,12643
 - thyroid gland,11060
 - uric acid,13147
 - vanadium,207
 - vegetarian diet, rat,14522
 - vit. A and B deficiencies,340
 - yeast extracts,2040, 2042
- of leucemic cells,9617
- of ox retina and chick embryo, 10982
- O₂ consumption, of amphibian egg during development, *Bufo*,8038
- of echinoderm eggs during fertilization reaction,11462
- of grasshopper egg, temp. coefficients,13342
- of malaria parasites free from red cells,15953
- measurement and data, *Colpidium* (Prot.),5100
- of nerve, *Callinectes*,7662
- in situ and tissue slices, guinea pig,12794
- by surviving organs or muscle, detn.,5531
- O₂ debt of frog tissues,16471
- of perfused organs,12643
- of pineal eye, *Anolis*,14701
- of skin, innervation and,11194
- temp. as affecting,4056
- of small amounts of surviving tissues,7407
- bacterial. (See *Bacteria and kinds of bacteria; Fermentation.*)
- catalysts. (See *Enzymes, respiratory, and various enzymes, e.g., catalase, dehydrogenases, oxidases, peroxidase; Pigments, respiratory, and various pigments, e.g., cytochrome, porphyrins; Glutathione; Thyroxin; Vitamin C; etc.*)
- plant. (See *Respiration (plant).*)
- poisons. (See *Carbon monoxide; Cyanides; Hydrogen sulphide; etc.*)
- Metacodon* (p.1882), redescribed,5216E
- Metacyclops* (p.1873), n. sp.,8838
- Metadena* (p.1870²) *pagrosomi*,8803
- Metagonimus yokogawai*, intermediate hosts,12297
- Metagonistylum* (p.1878¹) *minense*, in control of sugar-cane borer,15925
- METALLOPHASIS (Aves) (p.1881²), n. subgen.,16077
- Metals. (See also *Ions; Alkalies; Salts.*)
- as catalysts, for tubercle bacillus, 10090
- colloidal, effect on complement,9867
- on growth of cancer cells,13225
- linkage with thorium B, selective deposition, mice,4189
- effect on phospholipid and cystine oxidation by liver protein,7503
- on stability of insulin,7799
- heavy, effect on catalase, *Aspergillus*,15779
- on oxidation of ascorbic acid in tissues,8733
- oligodynamic action. (See *Oligodynamic action.*)

- Metamorphosis, amphibian, anatomy of thyroid during,5896
- changes in mandibular arch during,664
- effect on flukes,12252
- induced by pituitary extract, newt,16058
- as influenced by:
 - pituitary transplants *Ambystoma*,9281
 - thymus extracts,3845
 - thyroxamine,9338
- insect, fat body, hormonal effect, 12981
- hormones, water and blood vol. as affecting, *Lucilia*,5060
- of ileum of *Culex pipiens*, cytology,3452
- metamorphotype, in identification of Trichoptera,3361
- role of hormones in, *Drosophila*, 9781
- Phryganidia*,9782
- Metanephros. (See *Kidney.*)
- Metaphen, efficiency as oral antiseptic,2104
- as a skin antiseptic,13139
- in trichinosis therapy,8713
- Metaradiophrya* (p.1868²) *asymmetrica*, from earthworm,1575
- Metasphaeria* (p.1861⁴), n. sp.,15453
- Metastasis of tumors. (See under *Tumors.*)
- Metastelma* (p.1867³), n. sp.,2882
- Metastrongylus*, larvae, persistence in earthworms, control,17915
- Metatetranychus* (p.1874²) *ulmi*, control on fruit trees,5015, 5018
- Metaxenium, implications in developmental problems,1741
- Metencephalon. (See *Brain, and specific parts, e.g., cerebellum, and pons.*)
- Meteorology. (See also *Atmosphere; Climate; Rainfall; etc.; and under climatic factors, e.g., Light, Humidity.*)
- apparatus for fog water sampling, 16237
- of Atlantic, survey,14385
- instruments, and research techniques, book,12567
- physical, book,16233
- terminology, definitions,14384
- Meter, flow, constant pressure type, 12643
- electromagnetic,12643
- for measuring small blood flows of pulsatile streams,12643
- Methadren. (See *Epinephrine, r-n-methyl.*)
- Methemoglobin. (See under *Hemoglobin.*)
- Methenamine, effect on avascular pieces of omentum,4355
- mandelate, toxicity and synthesis, 5768
- as urinary antiseptic,11577, 13534
- Methionine, in blood globins of 5 mammals,14494
- conversion to cystine,3675, 12811
- deficiency, effect on wound healing,1432
- detn. and oxidative reactions,16380
- effect on:
 - blood and tissue glutathione,16408
 - casein metabolism,2025
 - cystinuria, man,16474
 - kidney lesions, rat,12777
 - in high fat diets, fatty livers and, rat,3700
 - homocystine as substitute for, vit. B complex and,16479, 16482
 - in human skin,15034
 - metabolism in cystinuria,3677
 - methylcholanthrene and, effect on growth, rat,3681
 - role in growth,16477
- 5-Methoxyindol, effect on Thormaelen's reaction and indican reactions of urine, rabbit,13141
- Methoxyphenylisopropylamines, pharm.,11226
- Methylalurate, metabolic fate,13178
- Methyl bromide, fumigant, for sweet potato weevil,12187
- in plague vector and reservoir control,1004
- rodent control by,6206
- Methyl carbitol, toxicity,9552
- Methylcholanthrene, carcinogenic activity,2355
- age as affecting,14906
- in mammary gland, mice,11300
- in mice,11288, 16830
- vitamins and,11291
- effect on:
 - cultures of fibroblasts,611
 - growth, of induced tumors in rodents,535
 - rat,3681
 - in production of bone fibrosarcoma,16840
 - of lung tumors, mice,16831

Methylcholanthrene (*continued*)
 in production (*continued*)
 of spindle cell sarcoma, culturable in vitro, 4218
 of skin tumors, mice, 11292
 of tumors, therapy and, 13211
 Methyl compounds, effect on creatine formation, 9188
 Methylisomyn, excretion, man, 293
 N-Methyl-8-phenylisopropylamine HCl, effect on central nervous system, 532
 Methyl red, as indicator in flocculation test for malaria, 6753
 test, for water sanitary analysis, technic, 13653
 Methyl salicylate. (See under *Salicylates*.)
 Methylthionine chloride. (See *Methylene blue*.)
 Methylene blue, action in cyanide poisoning, 13178
 adsorption by erythrocytes, infants, 14869
 control of methemoglobinemia due to sulfanilamide by, 5515
 dehydration, technic, 5261
 effect on:
 galvano-narcosis, 535
 sulfanilamide cyanosis, 13178
 toxic apnea, 14813
 in filariasis therapy, 10503
 methemoglobin formation by sulfanilamide counteracted, 527
 reduction test of milk, factors affecting, 9814
 milk bacterial types and, 13679
 milk keeping quality and, 17410
 in milk sanitary analysis, 11779
 11780
 storage in plant cells, pH as affecting, 4922
 synergism with paralyzant drugs, 535
Metoligotoma (p.1875²), revision, evolutionary and zoogeographic deductions, 6942
Metoponorthus (p.1873⁴), n. spp., 8761
 Metrazol. (See *Cardiazol*.)
 Metritis, tuberculous, methods of contagion in cattle, 2704
Metrosideros (p.1866³), n. sp., 6431
 Mexia, Ynes, biography, 3422
 Meyrick, Edward, biography, 12480
 Mellerae. (See also *Cell wall*; *Cellulose*; *Colloids*; *Membranes*.)
 in cell walls, plant, 6620
 nature, 17689
 Micheli, Pier Antonio, biography, 12482
Miconia (p.1866³), n. spp., 2827A
 2882, 17526
Microlestes (p.1879²) *lernerii*, 6965
Microstertia (p.1872³), n. sp., 3293
 Microanalysis. (See *Ash*; *Chemistry*, *micro*.)
 Microbe(s). (See *Bacteria*; *Microorganisms*.)
 Microbic dissociation. (See *Dissociation*, *microbic*.)
 Microbiology. (See also *Bacilli*; *Bacteria*; *Bacteriology*; *Fungi*; *Microorganisms*; *Protozoa*; and under specific microorganisms.)
 applied, 15399
 textbook, 9972
 of canned foods, 6263
 ecological, 13690
 history, book, 15410
 industrial, book, 10059
 popular, books, 10074, 15410
 of soil. (See also under *Soils*.)
 principles and methods, 6296
 textbooks, 11795, 15388, 15422
 MICROBRACHIDA (Ccl.) (p.1876⁴) *gilvicornis*, 6867
Microbrachon (p.1878²) *andalidis*, on *Typhlodermis*, 15897
hebetor, on moths, 15937
pygmaeus, on *Coleophora prunella*, 14109
vulgaris, parasite of pink bollworm, 12281
 Microchaetaceae (Algae), p.1860⁴
 Microchemistry. (See under *Chemistry*.)
Microchirus (p.1879²), monograph, 8807
variegatus, sensory papillae, 3391
 Micro-coagulator, for blood work, 8159
 Micrococcus, Bruce's. (See *Brucella melitensis*.)
 in cheese from milk of silage-fed cows, 6291
 of Doyen, in blood culture, in carcinoma cases, 2358
 in frozen-pack vegetables, enterotoxin properties, 10047
Micrococcus, rosy chocolate milk due to, 17418

catarrhalis, in bronchopneumonia, 8220
 comparisons of intradermal, agglutinability and in vitro tests for, in chronic infections, 11653
Microcos (p.1866²), n. spp., 15505
Microcotyle (p.1870³) *cephalus*, from Mugil, 10536
Microcotylidae (Platyhelminthes), p.1870³
Microcryptus sp., parasite of *Diprion*, 10432
Microcystis (Algae) (p.1860⁴), n. sp., 8385
aeruginosa, in alkaline lake, 13723
Microcystis (Moll.) (p.1872³), n. sp., 5114
Microcytherura (p.1873²) *affinis*, described, 6845
Microfilaria. (See also *Filaria*; *Filariasis*.)
 in day blood, staining technic, 17902
 of frog, intern. hosts, 6721
 in Kra monkey, Fed. Malay States, 6752
 in natives, E. Africa, 10503
 survival and location, dog, 5095
Microfilaria bancrofti, infection tests in mosquitoes, Batavia, 15968
malayi, endemic, Fed. Malay States, 5094
 in Kra monkey, 6752
 Microfilm, in geological survey, 10710
Microgobius (p.1880³), n. spp., 10623
Microhyla rubra, vertebral column, development, 5880
 Microincineration. (See under *Ash*.)
 Microlepidoptera (Lepidoptera), p.1877¹
Micromonospora, in soils and composts, 4703
Micromyzus (p.1875⁴) *oliveri*, L. H. and control, 12184
Micronecta (p.1875²), n. spp., 12379, 12380
Micronectes n. spp., 3343
 Microorganisms. (See also *Microbiology*; and under specific microorganisms.)
 air content in rooms, 2681
 anthocyanin occurrence (?) in, 2758
 of caecum of horse, 4671
 cold-storage of food and, 10041
 decomp. of plant materials by, P transformations in, 17423
 in desert soils, 17424
 effect on bog mud of Lake Pomoria, 17428
 estimation of population density in suspensions, 6764
 fungi pathogenic to man and animals, identification and classification, 9977
 Glover, in blood culture, in carcinoma cases, 2358
 growth, C in media as affecting, 11801
 growth substances for, review, 17458
 inclusion bodies resembling, in ticks, 11623
 industrial applications, 15399
 Klieneberger's L-organism, nature and significance, 2756
 of mouth, lysozyme and inhibin of saliva as affecting, 907
 numbers, arithmetic vs. logarithmic presentation, 6309
 oral incidence, 8280
 pathogenic to man and animals, survey in Argentina, 9981
 in California, 9982
 photoelectric nephelometer for counts vs. weights of populations, 1060
 photography, motion pictures, 5260
 pleuro-pneumonia-like, in white mice, 14921
 of rhizosphere, significance, 8849
 sewage, of Laidlow and Elford, bile salts as affecting, 9954
 short waves as affecting, 9105
 in silage, 1022
 single-cell culture methods, 6803
 of skin, 997
 of skin infections, stain technic for, 8248
 in soil. (See under *Soil*.)
 staining, technic, 1669
 survival in stained prep., 8270
 thermophilic, in composts, 8350
 transmission by paper, 2680
Microperitaceae (Fungi), p.1861⁴
 Microphage. (See under *Phagocytosis*.)
Microphanurus (p.1878²) *magacephalus*, egg-parasite of *Nesara*, descrip. and distrib., 5063
Microplecton (p.1878²) *fusiformis*, as parasite of *Diprion fructivorum*, 10432
Micropodidae (Aves), p.1881³
Micropodiformes (Aves), p.1881³
Microporallus (p.1862³) new comb., 6853
Microspectra (p.1877³), n. sp., 6889
Micropterus (p.1880⁴). (See also *Bass*.)
 tagging expts., 159
dolomieu, growth rate, factors affecting, 14421, 18043

shelters in Michigan lakes, 9060
 trematode infection as affecting, 1556
Micropus pacificus, in Japan, flight, 6093
 Microscope. (See also *Microscopy*.)
 bacterial counts by, method for milk, 13682
 electron, mineral localization in tissues by, 10875, 19876
 use in localization of muscle Ca and Mg, 7695
 fluorescent, drug storage by plasmodia demonstrated by, 11575
 tubercle bacillus diagnosis by, 8225
 fog, for observing droplet samples, 16237
 lenses, for correcting for curvature of field of view, 16117
 for microphotography, technic, 1668
 motion pictures with, technic, 7068
 Microscopical technic. (See also *Embedding*; *Fixation*; *Impregnation*; *Microscopy*; *Mounting*; *Preservatives*; *Sectioning*; *Sections*; *Staining*. For bacteriological material see *Bacteriological technic*.)
 apparatus for, 228
 books, 36, 15047
 combined celloidin-paraffin imbedding method, 9711
 for cutting, fixing and staining of freezing cats, 716
 dehydration of tissue stained with methylene blue, 5261
 digestion method of trichinosis diagnosis, 8706
 embedding and cutting of tissues, 11431
 for examination of food materials, 14425
 fixation and embedding of materials with non-aqueous solns., 9712
 Hortege's Ag impregnation methods, 4363, 7994, 7995
 for impregnation of perivascular nerves, 7996
 for labeling permanent slides, 11429
 Marchi method, 11408
 for marking sections, 16124
 modified Rhamy frozen section method, 7991
 new Ag method for staining nerve fibers, 7992
 new frozen section method for loose texture tissues, 17001
 for nuclear pathology, 88
 parasitological, chapter, 10498
 preparing otoliths for examination, 6958
 polarized light for study of myelin changes in nerves, 11430
 postmortem effects on Pickworth's benzidine method for blood capillaries, 17000
 for prep. of curettings for sections, 8001
 quadruple staining method, 17002
 rubber paraffin, embedding method, 7989, 8000
 for selective staining of tissues rich in K, 16999
 silver impregnation of reticulum fibers, factors affecting, 15044
 smear, with differential staining of nucleolus, 5284
 for smear slides, prep. method, 17339
 staining in old and young tissues, 37
 for staining and mounting tissues, 4364
 for staining pancreatic islet cells, 15045
 15046
 starch in wood, quantitative recognition, 8197
 "sump" method for *Drosophila* morph., 1773
 tissue sections, staining for *Plasmodium*, 10491
 triple stain for amphibian embryos, 17003
 two new mounting media, 9710
 use of dioxan in, 7993
 for xylem studies, 13782
 Microscopy. (See also *Microscope*; *Microscopical technic*; *photomicrography* under *Photography*.)
 apparatus, 3408
 chemical, manual, 12112
 curvature of field of view, correcting for, 16117
 of drugs and drug plants, manual, 15690
 history and future possibilities, 5257
 in Holland, history, 7074
 present limitations, 16120
 of soils, book, 2968
 use in desiccation and incineration expts., 8409

- Microsorex* (p.1882)³ *h. hoyi*, fetuses, number in,14312
thompsoni, in New Hampshire,5240
washingtoni, in Montana,5240
Microsorium (p.1863³), n. sp.,8421
Microspasma (Monocotyledones), p.1865¹
Microspasma (p.1861³) *alni*, as food of snail,4742
quercina, perithecia,4391
Microspirobolus (p.1873³), n. sp.,5124
Microsporangium. (See *Pollen*; *Stamen*.)
Microspore, of *Tradescantia*, chemistry of granules in,8597
use of Feulgen technic in study,5265
Microsporidia (Protozoa), p.1869⁴
from soil nematodes,16000
Microsporogenesis. (See also *Meiosis*; *Pollen*; *Sporogenesis*.)
dehydration as affecting, *Tradescantia*,10715
Microsporum, guinea pig susceptibility,11647
audouini, comparative pathological and immunological relations of infections by this and other dermatophytes,6203
from surfers foot,13623
canis, from surfers foot,13623
felinum, comparative pathological and immunological relations of infections by this and other dermatophytes,6203
Microstegium (p.1864³), tax.,8427, 15483
Microthrombidium (p.1874³) *alfreddugesi*, transf. to *Entomobdella*,3314
Microthyriaceae (Fungi), p.1861⁴
taxonomy,13733
Microthyriales (Fungi), p.1861⁴
Microtus (p.1882⁴), tax.,5227, 5228
agrestis, susceptibility to acid-fast bacilli,17298
tubercle-bacillus susceptibility, bovine vs. human strains,4626
alpinus, ecology,5239
chrotorrhinus, from Vermont,5230
montanus, population fluctuations, relation to raptorial birds,6990
montebelli, absence of Y chromosome,7121
pennsylvanicus, relative abundance, detn.,14432
swimming and diving,18105
pinetorum subsp. integration in,5240
ratticeps, blood used by *Aedes*,3202
micurus (p.1880⁴), n. sp.,6982
Middle lamella. (See *Cell wall*.)
Midge(s). (See *Cecidomyiidae*.)
Migraine, complexity and therapy,9652
Migration. (See also under *Birds*; *Fish*; *Insects*.)
of beavers, Michigan,3534
bird, book,16082
loss of weight during,7018
of S. Australia, notes,5204
over Swiss Alps,16086, 16087
of whistling swan and Canada goose,16088
fish, of native and introduced, in streams,14405
of small halibut in Faroe Area,3533
vit. A and,11006
of hosts, epidemiol. relations,11711
insect, of beet leafhopper in N. Mex. and Tex.,8645
of grasshoppers, expts.,14122
of *Megastera nodosa*,1657
migrant forms of aphids,17855
paleogeographic. (See *Phytogeography*; *Zoogeography*.)
of whales,1657, 1658, 1659, 1660
Mikania (p.1867⁴), n. spp.,13751
amara, *Bakerius* on,12381
Mikulicz's disease, etiology and comparisons,15232
relation to benign lymphogranuloma,4197
Mildew(s). (See also *Molds*.)
control by water spray,6688
powdery, snails feeding on,4742
Mildewing. (See *Leather*; *Molds*; *Paper*; *Textiles*.)
Milvonia (p.1877³) *coronifera*, biol. and control,1506
Milk. (All entries refer to cow's milk unless otherwise stated. See also *Butter*; *Butterfat*; *Buttermilk*; *Casein*; *Cream*; *Dairy products*; *Whey*; *Cattle*; *Lactation*.)
abnormal, from cows free of udder streptococci,8339
actinomyces, polysaccharides formed by, nature,8865
ammonia and urea in, detn.,2496
bacteria, *Brucella abortus*, agglutinin titer in blood and,6124
Milk (continued)
bacteria (continued)
behavior and isolation,6285
incidence in raw,11684, 11685
Chromobacterium *iodinum* from,17450
coliform, classification,1061
counts of viable, direct microscope method,2738, 13682
distr. in, cream separation as affecting,6284
Escherichia-Aerobacter, culture media for detn.,6287
from evaporated, thermal resistance, growth temp. as affecting,2739
hemolytic streptococci of raw vs. pasteurized,4699
mastitis streptococci in, Hotis test for,15404, 17331
numbers vs. biochemical values in,11778
Pseudomonas aeruginosa significance,6227
Salmonella spp., growth at air temp.,1040
Streptococcus zymogenes, significance,8342
tubercle bacillus, incidence, in Turin,2686
in raw vs. pasteurized,8338
types, incidence in,17413
methylene blue reduction and,13679
bacteriology, trends in,6288
bound water in, heat as affecting, 776
bread made with, chem., factors affecting,8837
value,12775
for Brick cheese,8340
brucellosis detection in, fresh-milk agglutination test,6230
serodiagnostics,2602
Ca in, availability,7459
utilization by pre-school children,11268
Ca and P in, availability,7453
as calf feed, physiological disorders from,17082
raw vs. pasteurized,9805
cancer-producing effect, mice,16837
carotene and vit. A detn. in,8092
casein number, mastitis diagnosis by,4684
cereal flours as antioxidants in,17090
certified, methods and standards, 15401
cheese from sour, bacterial discoloration,6276
chloride content,13369
chocolate, factors in selection and nutritional and sanitary properties,15109
ropiness in, bacteria causing,17418
as colostrum substitute,2485
colostrum, vit. D in,5580
composition, of cattle of various breeds,15110
from fasted cows,13362
mastitis incidence in relation to, 4673
concretions, in galactophore sinus of mare,8317
cow's added to human, detection, 13372
dried, as feed for chicks, effect on coccidiosis mortality,3237
as food, in Nigeria,11500
in poultry ration, effect on egg production,6019
dry solids, water sorption by,9813
effect on acid-base mineral balances, children,11265
elephant, vit. in,7467
energy yield, based on fat %,15108
live wt. and,2484
enzymes, curdling, studies,16314
functions,13382
lipase action in,8080, 8081, 8083
peroxidase, in raw, effect on thermal death rate of bacteria,6275
phosphatase test,1038
evaporated, factors affecting vit. B₁ in,9233
separation of fat in,9817
fat in. (See *Butterfat*.)
fermented beverages from. (See *Kefir*; etc.)
flavor, activated vs. burnt, causes, 8077
oxidized, as influenced by:
acidity,2482
carotene level in ration,6011
carotene and vit. C,9812
diet,2480
paper milk bottle treatment preventing,17412
fluorine in, aqueous vs. casein fraction,15107
Milk (continued)
goat, breed comparison, Gt. Britain,4410
comparison with cow's,8078
energy content,7404
grading, by resazurin test,17416
handling methods,13867
homogenized, advantages,2493, 13883
human, sulphanilamide and acetylsulphanilamide excretion in,1933
vit. B₁ in, ingestion of thiamin as affecting,16521
vit. C in,416, 7580
vit. D in,16539
pH detn.,13868
immunity to trypanosomiasis transferred via,15177
for infants, sanitary control methods,6286
suckling, Bavaria,5797
irradiated, properties and methods,13685
in trichinosis therapy,8713
vit. D in,8742, 11021
keeping quality, methylene blue reduction test correlations,17410
lactose in,9815
Mg in, adequacy, rat,9169
mastitis test with,4670, 6226, 17408
methylene blue test, factors affecting,9814
mineralized, as calf feed, 13360A, 17083
N distr. in, detn. of bacterial action on, technic,4698
nutritive value, sterilization as affecting,5526
paper containers for, sanitary condition,13652
pasteurized, evaporated and base-exchanged, gastro-intestinal response of children to,16568
pasteurization. (See under *Pasteurization*.)
powder, as calf feed,9806
properties,8076
processing, laboratory control,11776
production, avg. vs. high records, 15103
breeding for,12549
of cows on pasture, plus meat meal,17084
energetic efficiency and,7398
fasting and refeeding as affecting,16450
of goats, energetic efficiency, 11471
Kruger's method of detn.,11497
lactation and service period of some ruminants,8087
methods of predicting,11496
sunlight as affecting,775
protein, energy equivalents based on fat %,15108
during lactation,4414, 4415
precursors, goat,14684
resazurin test, practical use,13374
suitability of dye,9816
role in nutritional anemia, infants, 7818
ropy, bacteria causing,1035, 17418
sanitary analysis, agar-slant method,15403
biochemical tests in Palermo,6290
methylene-blue vs. resazurin tests in,11779, 11780
reduction test for,6289
sanitation problems,17413
scarlatina epidemic traced to,15315
secretion. (See *Lactation*.)
serological identification,8134
shipping, by rail in steel-lined tanks,13384
of silage-fed cows, bacterial flora of cheese from,6291
skimmed, effect on carotene assimilation,315
soft curd, artificial methods of production,13388
solids-not-fat, mastitis as affecting, 4411
sucrose in, detection,8075
sulphanilamide in, estimation,6131
Swiss cheese grade, bacteria content as affecting,2737
trace elements in,263
in undulant fever spread,15389
vit. C in,416, 8736, 4417, 5569, 7580
.....13371, 13379, 17089
vit. D in, season and feed as affecting,780
vol. and fat content, pituitary hormones as affecting,7584
winter, fodder supplements and nutritive value,13359
yield, of cows fed NH₄HCO₃ treated silage,17087
fertilizing of grazing grasses as affecting,10189
Milk fever. (See *Mastitis*.)

Milk sugar. (See *Lactose*.)
 Milklers' nodule, virus, inoculations and
 vacinia relationship, 4601
 Millet. (See also *Eleusine*, *Panicum*, *Pen-
 nibetum*, *Setaria* and other genera of
 millets.)
 corn borer on, Poland, 1494
 smut, irrigation as affecting, 1467
 variety tests, U.S.S.R., 13835
 Millipedes. (See *Diplopoda*.)
 Milo, nutrition, 2928
Pythium rootrot, var. resistance, 14081
 Mimicry. (See also *Coloration*, *protective*;
Defense.)
 Müllerian, of *Zygaena* by *Euchelia* moth,
 10775
 of wasps, by flies (*Systropus*), 8994
 Mimidae (Aves), p.1882¹
Mimorista cambogialis, biology, 12399
 Mimosaceae (Dicotyledones), p.1865⁴
Mimulus (p.1867²), n. var., 4786
Mimus (p.1882¹) *polyglottus*, in California,
 5178
Mimusops (p.1866⁴), n. spp., 2828
 Mind. (See *Behavior*; *Instinct*; *Intelli-
 gence*.)
Mindarus (p.1875⁴), new species from white
 fir, 18015
 Mineral(s). (See also specific minerals,
 e.g., *Calcium*, *Magnesium*.)
 absorption by developing eggs, turtle,
 12823
 by orchid roots, 12062
 by *Phaseolus*, transpiration as affect-
 ing, 12091
 by plants, kinetics, 12057
 by potatoes, relation to foliar diag-
 nosis, 13977
 adsorption on soils, methods of study,
 2928
 appetite, of parathyroidectomized rats,
 14549
 in apple shoots, season and rootstocks
 as affecting, 1275
 availability to plants, puddling of soil
 as affecting, 2969
 balance, acid-base, milk intake as af-
 fecting, children, 11265
 in Chinese foods, 16454
 in chloroplasts, 14010
 in crop plants, fertilizer as affecting,
 15528
 deficiency, in barley, effect on fructosan
 metabolism, 8584
 in diet, effect on rats, 2049
 diseases, of animals, 15383
 in diet. (See under *Diet*.)
 effect on:
 Addison's disease, 14977
 growth, excised tomato roots, 10316
 rabbit's cornea, 13281
 essential, atomic structure and, 3057
 in foods, tables, 9173
 in grape leaves, var. differences, 13895
 growth, calculations, 2048
 in lake waters, Wisconsin, 7225
 metabolism, in adrenal- and parathyroid-
 ectomized rats, 9287
 in bone fracture, 9159
 in diabetes insipidus and adrenalecto-
 mized cats, 14981
 discussion, 7403
 during development, chick, 8042
 in idiopathic steatorrhea, 3694
 as influenced by castration, 9367
 by cortin and NaCl, in adrenalecto-
 mized dog, 8658
 in *Petunia* grafts and mutants, 10815
 on P deficient diet, rat, 16445
 pig, 14548
 in pregnancy, 9177
 rat, 12787
 nutrition, animal. (See also *Diet*; and
 under specific minerals, e.g.,
Calcium.)
 Mn requirement of domestic fowl,
 6024, 11510
 plant. (See also *Nutrition (plant)*.)
 of apple, effect on keeping quality
 of fruit, 10376
 of bent grass, 3134
 boron deficiency, in potato, 14076
 relation to needle fusion in pine,
 14078
 in tomato, 14072
 of cereals, effect on yields, 6487
 of cotton, 3135
 deficiency disease, *Citrus*, 14071
 effects on leaves, 6664
 red beet, 14077
 Scotch pine, 1447
 effect on crown gall, 14087
 on disease resistance, 17819
 of hemp, critical periods in, 17672

Mineral (continued)
 nutrition (continued)
 plant (continued)
 Mg as related to peach chlorosis,
 15837
 Mn-deficiency effects, 14070
 N, P and K deficiency effects, 6564
 nutrient absorption by weeds dur-
 ing development, 6486
 of orchard fruits, 17803
 of *Phymatotrichum omnivorum*, 3169
 potassium deficiency, symptoms,
 6561, 15836
 of potatoes, relation to foliar diag-
 nosis, 4914
 review, 14440
 rôle of Mo, and symptoms of lack,
 17671
 of trace elements in, 1354, 6562
 10296, 10297
 13972, 13980
 of sweet potato, deficiency symp-
 toms, 13877
 of tobacco, 4913
 of wheat, 4911, 4912
 effect on root rot, 8623
 Zn content of weeds and crop
 plants, 6481
 Zn deficiency symptoms in maize,
 6481
 in potatoes, effect on cooking quality,
 13910
 radioactivity, Cordoba, 9596
 relation to photosynthesis, *Helianthus*,
 6615
 requirements for peach trees, 2986
 salts, toxicity to rats, 9343
 in soil. (See under *Soils*.)
 in sputum and ash of silicotic lungs,
 2420
 in therapy of deficiency and metabolism
 diseases, 11342
 trace, in foods, 263
 physiological action, 5551
 Mineral oil. (See *Petrolatum, liquid*.)
 Mineral water. (See under *Water*.)
 Mines. (See also *Caves*.)
 Mink. (See also *Mustela*.)
 Chinese, influenza virus transmission
 to, 8308
 distemper, inclusion bodies in, 6168
 prime pelt production in summer, by
 shortened daylight periods, 17114
Mitogypsinoides † *dehaartii* var. *formosensis*,
 (N), 10517
Mitoplosus (p.1880³), from Wyoming Eocene,
 5161
 Mitotic, action, sympathetic innervation
 and, 5771
 Miridae (Hemiptera), p.1875²
Mischocyttarus (p.1878⁴) *cassununga*, preda-
 tor of pink bollworm, Brazil, 12231
 Mistletoe(s). (See also *Arceuthobium*;
Viscum.)
 extract, cardiac action, 5780
 effect on liver volume, 5766
 saponin-like substance, 16772
 Mite(s). (See also *Acarina*.)
 associated with gall midges in willow
 gall, 1625
 broad, control on cyclamen, 10416
 bulb. (See *Rhizoglyphus hyacinthi*.)
 bulb scale. (See *Tarsonemus approxi-
 matus*.)
 burrowing, in mange, effect on leather,
 10440
 caught by traps attached to airplanes,
 10767
 as cause of dermatitis, Bulgaria, 10445
 of sandworm eruption, S. Africa,
 15920
 on citrus and grape, control, S., 3176
 14106
 feather. (See *Liponyssus sylvaticum*.)
 host animals and plants, S. Africa,
 10580
 larvae, in lymphatics, goats, 8695
 lung, from snake (*Coluber*), 1617
 oribatid, *Moniezia cysticeroids* in, trans-
 fer to sheep, 1569
 on pear, injury by forms of, 10393
 red. (See *Paratetranychus*.)
 red spider, as prey of *Scolothrips sex-
 maculatus*, 10446
 tropical, cotton injury by, 12191
 as vectors, of "Q" fever, 8210
 of relapsing fever, 17376
 of typhus, 984
 Mite-fever, *Rickettsia*, tissue culture, 6166
Mitella (p.1865⁴), n. f., 1158
 polymers, gregarine in, 6766
 Mitochondria. (See also *Cytoplasm, com-
 ponents*; *Plastids*.)

actinic light as affecting, cancer and,
 13209
 in domestic fowl, from embryo to adult,
 7111
 of genitalia of pulmonates, 4342
 in liver cells of salamanders, 11426
 relation to nucleus during development,
 8032
 secretion and lepidosomes, in pulmonate
 Gastropods, 7115
 in striped muscle, amphibia, 7987
 and vacuolar systems, Saprolegniaceae,
 7101
 Mitogenesis, in ovarian growth, 7585
 in vaginal epithelium of rat, 12939
 Mitogenetic ray, relation to bios content,
 yeast, 8569
 Mitosis. (See also *Cell division*; *Chromo-
 somes*; *Meiosis*; *Nucleus*.)
 in *Amoeba*, 3266
 in amphibian hybrids, 10788
 asymmetrical, in microspore, 12504
 in asynaptic *Pisum sativum*, 1704
 average time of phases in developing
 embryos, 17037
 behavior of chromosome fragments,
 grasshopper, 8912
 chromosomes in, fast neutrons as af-
 fecting, 12698
 contorted, plasmagel layer and, in
 sarcoma, 16863
 in *Dientamoeba*, 5105
 dynamics of traction fibers, *Vicia*,
Allium, 10721
 evidence, in *Chilodon uncinatus*, 1722
 of fibrocytes, alcohol as affecting, 9772
 in genus *Cicer*, 12505
 in genus *Salvia*, 1697
 as influenced by:
 centrifugation, oligochaete egg, 1728
 chloral hydrate, *Vicia faba*, 10720
 hormones, Lepidoptera pupation,
 5145
 β -naphthyl-methylether and β -naph-
 thyl-ethylether, 12503
 phenylurethane, *Triticum*, 16156
 SH conc., *Phaseolus*, 10314
 u.-v. radiation, 8570
 in Peridiniaceae, 8715
 in *Pyronympha*, 10516
 rate, in normal and colchicine treated
 tadpoles, 2472
 rhythm, in human epidermis, 57
 in kidney of rat, 55, 693
 of single cells, quantum relations, 8868
 in *Teranympha*, 10515
 in *Tridacnaria*, toxic substances as af-
 fecting, 17733
Mitra (p.1872²), n. sp., 6828
Mitraphanes (p.1881⁴), spp. in Peru, 7036
 Mitridae (Mollusca), p.1872²
 Mitserlich law, practical application,
 6563
Mnemiopsis leidyi, luminescence in absence
 of O₂ in, 1901
 Mniaceae (Bryophyta), p.1863³
 Mochokidae (Pisces), p.1879⁸
 Model(s). (See *Museum, technic*.)
 Modification(s). (See *Variation*.)
Modiolus (p.1872³), functional anatomy of
 bivalve, 10560
modiolus, in food poisoning, 11687
Moina (p.1873¹), race differentiation,
 12319A
 Moist chambers, for expts. on isolated or-
 gans, 213
 Moisture. (See *Atmosphere*; *Humidity*;
Rainfall; *Soil water*; *Water*.)
 Molasses, bone dissolution by fermenta-
 tion, 4689
 cane, as corn substitute, for beef cattle,
 13357
 Molave. (See *Vitex parviflora*.)
 Mold(s). (See also *Fungi*; *Mildews*; and
 under the genera of molds, espe-
 cially *Aspergillus*, *Mucor*, *Penicillium*,
Rhizopus, etc.)
 acid formation by, iodoacetate and
 fluoride as affecting, 11766
 on broccoli, factors affecting, 10231
 in butter, factors affecting, 10064
 cellulose-decomposing spp., 1033
 on cold storage eggs, 4427
 culture collection, 1052
 disinfectants tested against, 17397
 ethylene oxide- α , β -dicarboxylic acid
 production by, 17407
 in industries, book, 10059
 isolation and culture, molasses agar for,
 9979
 new spp. from butter and oleomargarine,
 6338
 in normal stools, incidence, 8252

- soil, auxin produced by.....17435
 tyrosine transformation to pigments
 by.....17437
 sooty, taxonomy and ecology.....17333
 spore ejection and dispersal.....8889
 taxonomy of Mucorales.....6354
 Mole(s). (See also genera, e.g., *Talpa*.)
 Cape Golden, shoulder musculature.....4360
 shoulder mechanics in relation to loco-
 motion.....4310
 Mole cricket. (See *Gryllotalpa*.)
 Molecular asymmetry. (See *Asymmetry*.)
 Molecular weight, of antigen, effect on
 antibody-antigen ratio in specific
 precipitates.....9834
 calculation.....16299
 by adsorption phenomena.....11554
 Molendaa (p.1863²), transfers from.....4748
 Molgula (p.1878²), distribution and n. sp.,
6946
 Molliensia formosa, reproductive be-
 havior, matrocliny.....5346
 Mollisiaceae (Fungi), p.1862¹
 MOLLISIASTEE (Fungi) (p.1862¹), 15453
 Mollisia (p.1872¹). (See also *Clam*; *Mus-
 sel*; *Shellfish*; *Snail*.)
 bivalve, functional anatomy.....10560
 breeding of lamellibranch larva.....3301
 colonization of rocky shores.....12577
 discordant valves in pelecypods, note,
10563
 as interm. host for *Schistosoma*, E.
 Africa.....1574
 land and freshwater, ecology.....8993
 larval trematodes of, Australia.....3279
 loricates, mantle cavity.....16011
 of Quill Lakes basin, Canada.....12612
 respiration and CaCO₃ metabolism, 9080
 shell boring, by bryozoa.....12312
 shells, buffering action.....10981
 of Monteiro collection.....3299, 3300
 pocket guide to.....10562
 preserved as clay replacement, 5121
 Moloney test, for diphtheria immunity,
 statistics.....13497
 Molophilus (p.1877²), n. spp.....14251
 Molossidae (Mammalia), p.1882²
 Molting, of *Callinectes sapidus*.....9206
 light as affecting, greenfinch.....11111
 rôle of sinus gland in crayfish, 14611
 Molybdenum, effect on N-fixation by
Azotobacter.....10070
 as essential element for plants.....17671
 Monacrosporium (p.1863³), n. sp.....17487
 Mongolism. (See *Idiocy*, *Mongolian*.)
 Monhysterata (Nematoda), p.1870⁴
 Monhysteridae (Nematoda), p.1870⁴
 Moniezia (p.1870³) expansa, abnormality,
8734
 extract, toxicity.....14179
 life history.....17936
 in mites, transfer to sheep.....1569
 pasture infestation, variation.....1569
 in sheep, Sweden.....5091
 Monilia (p.1863¹), on fruits, resistance of
 apple and cherry vars., in Germany,
10868
 in normal stools, incidence.....8252
 albicans, in exptl. bronchomoniliasis,
 rabbits.....14917
 growth, factors influencing.....972
 in normal stools, incidence.....8252
 candida, heat resistance.....15892
 formosa, ethylene oxide- α , β -dicarboxylic
 acid production by.....17407
 tropicalis, polysaccharides, sensitizing
 and antigenic capacities.....13505
 Moniliaceae (Fungi), p.1862⁴
 Moniliales (Fungi), p.1862⁴
 Moniliasis. (See also *Blastomycosis*.)
 Monimiaceae (Dicotyledones), p.1865³
 Monkey(s). (See also *Apes*; *Primates*; etc.;
 and under genera, e.g., *Macaca*,
Pithecius.)
 Acanthocephala in.....3286
 albumin, serol. differentiation.....8135
 Ascaris infection expts.....15946
 blood groups.....923
 brain, island of Reil, fiber connections,
16970
 supra optic nuclei, degeneration after
 section of infundibular stalk,
16975
 of Canal Zone, habits.....1674
 captive, nematode in, life history, 15955
 as carrier of *Capillaria* ova to man, 8691
 Cebus, estrus cycle.....5669
 color vision and blindness in.....14705
 dog *Strongyloides* uninfected to.....10479
 dysentery, *Shigella paradysenteriae* caus-
 ing.....965
 endocrine therapy.....11405
 epilepsy in.....14732
 estrus in howler and spider.....9415
 ♀♀, gonadotrophic extracts as affecting,
11052
 habits, of lorissoid and platyrrhine.....7044
 hypothalamus, capillary beds of nuclei,
 significance.....15007
 immune specific M-agglutinins produced
 in.....15171
 inclusion-blennorrhoea (exptl.) in.....4594
 Kra, microflora in, Fed. Malay States,
6752
 leaf, tail posture.....7045
 lipids in genital tract, sex cycle and,
12643
 lymphatic pathway from nose and
 pharynx.....676
 malaria. (See under *Malaria*.)
 mammary gland development in ♂ and
 ♀ rhesus.....11100
 mouth lesions, avitaminosis as affecting,
7893, 7894
 motor apraxia in.....12643
 permeability of blood-CNS barrier in
 poliomyelitis.....9081, 12649
 phosphatase in prostate, testosterone as
 affecting.....12957
 placenta praevia in.....17043
 reproductive processes in, review,
11104, 12643
 rhesus, allergy in passively locally sen-
 sitized abdominal organs.....924
8161
 anaphylaxis in, horse serum and egg-
 white as antigens.....6062
 Cowper's gland, acina/stromal tissue,
 sex hormones and.....2438
 eye structure.....11433
 new Bacteriacea from intestines.....8362
 ovary, gonadotrophic hormone as af-
 fecting.....5626A
 tuberculosis spontaneous in.....11708
 spirochaetes in gastric glands.....9962
 tonic immobility, induction by manipu-
 lation, immobilization and visual
 field inversion.....3985
 Trypanosoma gambiense in, duration of
 infection.....14169
 tuberculosis in, serodiagnosis.....2601
 uterus during labor.....12643
 vit. M deficiency in.....311
 Monobaeus (p.1878³), morph., phyl.....1632
 Monoblastus (p.1878³), sp. parasite of
 spruce sawfly.....12209
 Monobromacetic acid, effect on muscle
 after-potentials.....4052
 Monobryozoon (p.1871⁴) ambulans, morphol-
 ogy.....6820
 Monobryozoontidae (Bryozoa), p.1871⁴
 Monocercomonas (p.1868³) mackinnoni, in
 Japanese beetle.....1580
 Monocercomonoides (p.1868³) melolonthae, in
 Japanese beetle.....1580
 Monochamus (p.1876³), n. sp.....6883
 rusticator, as pest of teak.....14131
 Monochirus (p.1879⁴) hispidus, sensory
 papillae.....3391
 Monocotyledones p.1864²
 Monocrepidius (p.1876²) auritus, on
 Tyloderma.....15897
 Monocteninae (Lepidoptera), p.1877¹
 Monocyte. (See under *Leucocyte*.)
 Monodontomerus (p.1878³), morph., phyl.,
1632
 Monoflata (p.1875³), n. sp.....8785
 Monogenea (Platyhelminthes), p.1870²
 Monognathus (p.1879²), development, af-
 finities, descr. of spp.....18040
 Monograptus (p.1869⁴), spp. pneumatocysts
 of.....3372
 Monohystera (p.1870⁴) paludicola, from
 Barbos.....15998
 Monohystrella (p.1870⁴) mysorensis, from
 fish.....15998
 Monoiodoacetic acid, effect on:
 adenosine triphosphoric acid in
 muscle.....9504
 glutathione.....11764
 muscle metabolism and work capacity,
5705
 zymase inhibition by.....11764
 Monomorium (p.1878⁴) pharaonis, distr. by
 ships.....16250
 Mononuclear. (See under *Leucocyte*.)
 Mononucleosis, infectious. (See also
Listeria monocytogenes.)
 atypical case.....4457
 etherogenetic antigens in, significance,
11552
 exptl. production with lymph node
 emulsion, monkeys.....5824
 isoagglutinin titers.....7877
 leukoblastic mitosis.....14926
Listrella monocytogenes associated,
17310
 monocytic leucemia and.....4253
 plasmacytoid mononuclear cell conc. in,
11333
 sero-diagnosis.....2395, 9986
 sheep cell agglutinins in, Strauss
 method.....13242
 Wassermann and Kahn tests in.....11667
 Wassermann and Kline reactions in,
4457
 Monophyle (p.1867²), n. sp.....6437
 Monorchidae (Platyhelminthes), p.1869⁴
 Monostroma (p.1860²), spp.....8381
 Monotremata (Mammalia), p.1882¹
 Monozoa (Protozoa), p.1868¹
 Monster(s). (See *Teratism*; *Teratology*.)
 Montane. (See *Mountain*.)
 Moor(s). (See under *Bags*.)
 Moose. (See also *Alces*; *Elk*.)
 Echinococcus in, Minn.....15969
 leukoencephalitis, etiol., path.....14915
 Moraceae (Dicotyledones), p.1865²
 Moraria (p.1873²) varica from France,
17968
 Moraxella (p.1861¹), tax.....10085
 Mordant, ammonium molybdate as, for
 Mann and Weigert-Pal stain meth-
 ods.....10089
 Mordelloidea (Coleoptera), p.1876¹
 Morinda (p.1867²), n. sp.....6431
 Mormyridae (Pisces), p.1879²
 Mormyrus (p.1879²), n. sp., from Africa,
6968
 Morning glory. (See *Ipomoea*.)
 Morone biology.....10814
 Morphine, addiction, Ca therapy in, 13178
 alkaloids, in tuberculosiis.....2293
 analgetic action.....4129
 in anesthesia of lower animals, review,
1019
 assay by tail raising reaction, mouse,
13162
 codeine synergy, on cough and resp.
 tract cilia.....5751
 derivatives, addiction characteristics.....13178
 analgetic action, dogs.....4129
 effect on oxidations.....13178
 toxicity, age and, rabbit.....11218
 detm.....9117
 dihydrodesoxy, effect on nervous sys-
 tem, mouse.....13152
 effect on:
 amphibian lymph hearts.....16735
 anesthetic action of cocaine-like
 drugs.....4141
 anorexia of vit. B. deficiency.....5848
 cilia of respiratory tract.....5750
 complement fixation.....929
 cyclopropane anesthesia.....7797
 heart.....13178
 anesthetics and.....11248, 11249
 insulin action on body temp.....11241
 intestine.....7795
 metabolism.....7742, 7778
 muscle work.....12643
 nervous system, mouse.....13152
 pain.....13178
 respiratory reflexes.....14817
 scratch reflex, cat.....14865
 premedication, cyclopropane and ether
 as affecting heart after.....13178
 toxicity in mice, in relation to cold
 front.....10759
 Morphogenesis. (See also *Axial gradient*;
Development; *Growth*; *Polarity*; *Re-
 generation*; *Transplantation*.)
 cell shape and compressed lead shot,
 compared.....11922
 cell volume-shape relationships, 11923
 characteristic of living matter.....1
 of cranial-caudal polarity, book, 9630
 transplantation, book.....5952
 animal, of after-feather, fowl.....699
 of anus in tree frog.....13336
 in aphids, detm. of sensoria and an-
 tennal color in relation to
 detn. of wings, ocelli and wing
 muscles.....13349
 of aphid wing, physiological condi-
 tions as affecting.....3349
 of Ascidella giant larvae.....9795
 of axolotl, after insertion of parts of
 various organs under skin,
17051
 bilateral detm. in centrifuged echino-
 derm embryos, factors in, an-
 alysis.....5972
 in spirally cleaving eggs, centrifu-
 gal force as affecting,
Urechis.....4598
 of blindness in isopods.....5126
 of bone, rôle of tension and pressure
 in.....4387
 of chick, colchicine inj. as affecting,
8050, 15072, 15073

Morphogenesis (continued)

- animal (continued)
 of coleopteran, KCN as affecting, 765
 of color variations in isopods, 12328
 of compound eye after removal of left brain, *Bombus*, 9796
 of cranial musculature, *Ambystoma*, 755
 cross and self fertilization, factors affecting, 4389, 4390
 differentiation of chick blastoderm in vitro, 757
 order in relation to detn. order in gamic ♀ aphids, 9789
 of transplants of lethal hybrids, 9773
 developmental stimulus in pupa of *Phryganidia*, 9782
 of ear ectoderm, *Ambystoma*, 4393
 egg size vs. embryo size in hydra, 6779
 of elytral spots in beetles, 3334
 of embryonic mouse skin on chorio-allantois of chick, 8053
 emergence of Lepidoptera pupae, factors affecting, 12396
 of *Ephestia*, regulatory capacity during, 9791
 of epithelial hypophysis and infundibulum in *Triturus*, 15076
 of eye, capacity of early chick blastoderm, 9759
 factors affecting, *Hyla*, 739
 of eye ball and lens, size regulation, *Ambystoma*, 11448
 of forelimb opercular perforations in amphibians, 15077
 of frog, colchicine as affecting, 9771
 gastrulation in *Dendroaster*, forces causing, 17050
 of genetic ♂ and ♀ lizards, folliculin injs. as affecting, 9769
 of gill slits and nephridia in chordates and prochordates, 9761
 of gonad preprimordia transplanted in *Ambystoma*, 13333
 of grafted eyes and tails, size regulation during starvation, *Ambystoma*, 13374
 of half eggs, *Chaetopterus*, 13343
 host determined variations in *Lecanium* (Homopt.), 3347
 hydrostatic pressure effects on dividing egg cells, *Arbacia*, 4388
 of *Hyla* after ablation of pars buccalis of pituitary, 8045
 induction of lenses in amphibians, 4392
 of medullary structures in *Triton*, 15082
 of puparium formation in *Drosophila*, rôle of ring glands in, 9784
 of secondary embryos, *Triton*, 746
 of secondary neural plate by inorganic implantation, *Triturus*, 754
 stimulation and genic activity, 13329
 inductive capacity of liver and kidney transplants, *Triton*, 748
 innervation of wing and limb bud transplanted to host embryos of same age, chick, 13331
 of interspecific organ transplants in *Drosophila*, 17061
 of iris transplants regulatory phenomena in amphibians, 5959
 of lens transplants in *Triton*, 17053
 of limb discs, significance of surrounding tissue in, 5961
 5961A
 temp. as affecting, *Ambystoma*, 744
 localization of neural inductor and tail mesoderm, *Hyla*, 758
 of primordial germ cells in early developmental stages, *DiscoGLOSSUS*, 13335
 of mictic and amictic individuals, *Rotifera*, 14220
 of molluscs, bivalve, functional anatomy, 10560
 growth rate of *Purpura*, 3302
 life history and environment as affecting, *Purpura*, 3303
 size and form, altitude as affecting, 8747
 mouth-part morph. governing feeding habit in snails, 14228
 myotome fusion after Li treatment, *Ambystoma*, 743
 nerve-muscle specificity in *Triturus*, 11375
 neural induction by inorganic matter, 5960

Morphogenesis (continued)

- animal (continued)
 and nuclear conditions in merogonic amphibian hybrids, 9768
 of *Obelia*, guanine as affecting, 9785
 obesity in fresh-water mussels, 8743
 of optic vesicle, self differentiation of intra coelomic grafts, 15080
 of parts of teleostean embryos implanted into amphibian embryos, 8049
 of physiological races, in snail, book, 12313
 pigment cell behavior in *Triturus*, 13337
 pigmentation, changes after centrifugation of early gastrula, *Rana*, 742
 induced by neural crest grafts in chicks, 5954
 pattern in Lepidoptera, 10615
 of presumptive ectoderm, localized heat as affecting, *Hyla*, 33334
 of *Psammochinus* after constriction of cells during cleavage, 9788
 relationship of *Graphidium* (Nemat.) to host, 10548
 rôle of genes in, 11441
 of gradient systems in head localization, *Euplanaria*, 13348
 of hormones in, *Drosophila*, 9781
 Lepidoptera, 5145
 of presumptive endoderm in early development of vertebrates, 15081
 serological reactions of *Drosophila* spp., 6893
 of sex, in chick, ♂ hormone as affecting, 759
 in Hymenoptera, environmental control, 14267
 of sex organs in mammalian embryos, estrogens as affecting, 15079
 sex reversal induced by testis implants, *Ambystoma*, 749
 stimulation of presumptive epidermis by cell extracts and chemicals, *Ambystoma*, 8040
 of tail gut and anus in urodeles, 4391
 of teleost fish, 2,4-dinitrophenol as affecting, 9774
 of terrapin embryo, temp. as affecting, 15074
 of transplanted limb primordia in chicks, 8047, 13332
 of transplanted limb rudiments, reversal of polarity in, *Ambystoma*, 11454
 of transplanted somites, *Ambystoma*, 745
 of *Triturus* after gelatin injs. into segmentation cavity, 8046
 of Urodeles, analysis, 752
 of vertebrate organism, 17040
 x-ray induced persistence of larval character, *Drosophila*, 8055
 plant, adventitious root formation, *Salix*, 1166
 air pore movements in bryophyte, 11846
 of algae, chromosome and pyrenoid no. correlated, 13725
 chromosome no. and distr. of red, 13722
 disassociation in, 6327
 nuclear division and organ size, 10103
 thermal, 6335
 of algae and fungi, book, 6332
 of amyloiferous tissue of potato in vitro, 11925
 anatomy, altitude as affecting, 1139
 of carpel, monograph, 11918
 of cell shapes in pith, compression as affecting, 17558
 cell size and fruit size in cucurbits, 10171
 of cell wall stretching, 6445, 8447
 structure in *Avena* coleoptile, 6445
 chromosome no. vs. ligulate flower no., *Chrysanthemum*, 1134
 of cladode of *Ruscus*, 11924
 of colonies and hybrids of *Iris*, 4771
 of cotton fiber, 17555
 of flower, review, 11931
 of form in *Stilene*, crossing as affecting, 10139, 10140
 10141, 10142, 10143
 of *Fucus*, laboratory conditions as affecting, 2790
 of gametes in primitive alga, 10107
 of grass roots, 17560
 of hydathode of *Spartina*, 11929
 of intercellular spaces in mesophyll, *Artemisia*, 4808

Morphogenesis (continued)

- plant (continued)
 leaf anatomy, rainfall as affecting, 4803
 leaf form variations in *Acer*, 4776
 light and N as affecting, tomato flower, 6514
 of lilies, chemistry and classification, 13742
 of normal vs. false trabeculae, 13780
 of ovuliferous hairs in *Cela*, 4811
 of phloem, 17556
 ontogeny, tobacco, 1167
 relation to flowering, 10172
 structure and function relationship, 10166
 of phyllody in *Crotalaria*, 4804
 of phyllotaxy in *Gentiana*, 2912
 of *Plantago*, correlation of characters in a population, 15482
 of polymorphism in *Aster*, 6428
 of polyploidy in *Alopecurus*, 4774
 in *Crepis* (Dicot.), 4777
 rôle of auxin and heteroauxin in, 12064
 root hist. in *Aithaea*, pressure as affecting, 4807
 of sclerenchymatous fibers of monocot leaf fibers, length, factors in, 10169
 of seed and sporophyll of *Juniperus*, 15523
 of shoot apex in seed plants, 17557
 spruce cone size vs. altitude, 10118
 of storage organs, *Helianthus*, 1411
 stomatal formation in pine embryo, culture medium as affecting, 2911
 summer-wood ratio, age as affecting, 2917
 tissue organization vs. vein distr. in leaf, 10173
 of vascular plants, phylogeny, 2905
 vegetative responses related to anatomy in apple, 11928
 Morphology. (See also Morphogenesis.)
 MORROWCERNUS (Echin.) (p.1871)
 (Cb), 10555
 Mortality. (See also Death; Statistics, vital.)
 diphtheric, 6219
 from metabolic diseases, factors in, 986
 of negroes vs. whites, U. S. A., 6210
 respiratory-disease, factors in, 6209
 in U. S. A. Navy, time study, 8311
 MORTONIODENDRON (Dicot.) (p.1866)
 2885
 Morus (p.1865). (See also Mulberry.)
 in Japan, 6409
 leaves in vit. D deficient diet, rat, 16541
 mesozygia, descr. and distrib. in E. Africa, 13767
 Mosaic(s), marble and alabaster, lichens on, Italy, 13741
 Mosaic(s) of *Bombus*, genetic constitution, embryology and, 7146
 Brahma Barred Rock, in domestic fowl, non-disjunction and, 1778
 Bronze-Bourbon Red, in turkey, 5333
 formation and translocation, maize, 75
 of *Habrobracon*, body color, 3468
 single cell, in maize seeds, 8935
 white bar-eyed, in *Drosophila*, 1770
 Mosaic diseases. (See Plant diseases, virus; Variegation; Virus; and under the crops or plants affected by specific virus diseases, e.g., Potato, Sugar cane, etc.)
 Moschus (p.1883) *moschiferus*, races and habits, Thibet, 5223
 Mosquito(es). (See also under diseases transmitted by, e.g., Malaria, Yellow fever; under Culexidae; and under genera, e.g., Aedes, Anopheles; Culex.)
 anopheline, biting act in, 18007
 detn. of larval population in rice field, 14167
 distr. near Ravenna, 8701
 eggs, mounting method, 12215
 habitat; factors in, Italy, 8655
 as malaria vectors, Brit. Guiana, 5090
 in Panama, 12270
 stream breeding, control, flushing siphon with dam, Malaya, 12222
 trap records, Fla., 12213
 trematode in, 10502
 breeding, defective irrigation as affecting, 10508
 control, ammonium sulphate for, 12211
 by diking, Fla., 12218
 ditches remaining effective, Mississippi, 5059

- entomay machine,10444
larvicides, plant principals as, Assam,12223
in Louisiana,6701
petroleum oils as ovicides,12224
phenothiazine as larvicide,1518
by predaceous fish, Bengal,12225
relation to wildlife conservation, salt marsh,12214
by siphoning,12222, 15914
surveys, relation to conservation and flood programs,10484
traps for and records,12218, 12221
culicine, as vector of malaria, penguins,12265
development of *Foleyella* larvae in,10483
of England,18006
filariasis as affecting,8694
infection tests with *M. bancrofti*,15968
infectivity of *Plasmodium falciparum* for,15949
as intermediate hosts of frog filaria,6721
jungle, yellow fever virus in,8661
in Lapp folk music,13581
larvae, artificial rearing,1518
hemolymph, regulation of osmotic pressure and Cl conc. in,3655
malaria in, prontosil as affecting,15186
malarial, control, India,15951
infectivity, season as affecting, Bengal,15972
Szechwan,14171
Nysorhynchus group, Sao Paulo, exptl. *Plasmodium vivax* infection in,10490
Plasmodium infection, chemotherapy of malaria cases as affecting,9915
Plasmodium life cycle in, illus.,17904
pool, in birch forest, biota, Lapland,3202
repellants for,10487
spirochaetes in salivary glands,14189
in stables, Dutch E. Indies,3245
staining malarial oocysts in,12268
in therapeutic malaria, infectivity after repeated use,14163
of paralysis,8710
in treeholes,5877
as vectors, of avian malaria, control,6733
of equine encephalomyelitis,2614
of filariasis,5094, 8714, 12262
of Japanese epidemic encephalitis,952
venom, stability in vitro,13455
yellow fever virus behavior in,13558
Moss(es). (See also *Bryophyta*; *Sphagnum*.)
cellulose in, chem.,4954
communities,5382
epiphytic, on trees, relation to moisture,10757
flora, of western Jutland,10788
of N. America, book,4748
exsiccata,15478
survival after freezing, water content as affecting,1402
tropical east African,1093
Motacilla (p.1882), bird banding,14296
Motacillidae (Aves), p.1882
Moth(s). (See also *Lepidoptera*.)
Antler. (See *Charaxes graminis*.)
Brown-tail, control,1505, 17885
diamond-back. (See *Plutella maculipennis*.)
gypsy. (See *Porthetria dispar*, (= *Lymantria dispar*)).
Indian-meal. (See *Plodia interpunctella*.)
leopard. (See *Zeuzera pyrina*.)
metamorphosis,5141
monk. (See *Panthea coenobita*.)
nun. (See also *Lymantria monacha*; *Porthetria monacha*.)
biol. control,1504
sex ratio and breeding relationships,3195
temp. and humidity optima for,3194
trapping ♂♂ by captive ♀♀,3195
pea. (See *Cydia nigricana*.)
processionary. (See *Thaumetopoea pythi-ocampa*.)
proofing, preparations and test methods for,1502
time of emergence,12396
webbing clothes. (See *Tineola biselliella*.)
Motion picture(s). (See also *Photography*.)
in analysis of bacterial colony motion,1062
of animals in native habitats, apparatus,12643
with binocular microscope, technic,7068
biological, film for various purposes,12466
of developing egg, *Coregonus*,15065
of drug action on hypothalamus,2237
of embryol. development, frog,8034
film storage and evaluation, by scientific institutions,10688
medical, apparatus and technic,12464
micro, apparatus for,13785
technic,5260
of protoplasmic movement in heart muscle,4048
Moulting. (See *Molting*.)
Mountain. (See also *Alpine*; *Altitude*; *Atmosphere*.)
Alps, vegetation, phytogeographical study,128
Carpathian, beech forests, altitudinal distr.,7201
East Alps, geobotany,3513
floras, of Sweden,17548
of Switzerland,17549
Goentoe, revegetation, Java,7210
Himalayas, alpine and subalpine zones,5386
Mounting. (See also *Microscopical technic*; *Museum technic*.)
media, incorporation of counterstain in,9713
technic,16121
2 new media for,9710
Mouse (Mice). (See also under genera of mice, e.g., *Mus*.)
Ascaris infestation of lungs, exptl. studies,14186
body temp., detn.,231
body wt. cycles in,10995
brain autolysate and trypan blue injections as affecting,4366
breeding, simple method,8952
Ca balance in pregnancy and lactation,2166
carcass, ether extract, effect on cancer production,13215
choriomeningitis in. (See under *Choriomeningitis*.)
diaphragm, development,8037
domestic, of U. S.,5222
dwarf, fasting as affecting blood sugar in,7360
dwarfism, due to hereditary ant. pituitary deficiency,4283
ecology,5239
embryo resorption induced by aldehydes,13032
encephalitis, spontaneous infection, susceptibility,15227
exptl. equine hydatid disease in,10486
exptl. *Trypanosoma evansi* in,12259
extermination, by "rat-virus" preps., statistics,8282
fertility in cross-bred,8951
field, pyloric adenoma due to *Capillaria*,12266
fostering, effect on breast cancer incidence,16838
genetic ♀♀, sex differentiation, prenatal adm. of testosterone as affecting,16989
genetics, grey-lethal, new data,5342
inheritance of taillessness,12548
linkage of naked and caracul,12547
selection for tail-spotting,3461
2 tailless mutants, development of malformations,784
Golgi apparatus cytol. changes with age,7945
growth rate of white,14556
Hb in, factors affecting,249
hereditary changes after x-ray exposure,5476
Hymenolepis from man in,10507
insulin action in suckling,2337
intersexes produced by estradiol injections into pregnant,13043
.....13044
keratinized paracecal cysts,14878
leprosy, immunological reactions in,9835
Leptospira sejei from,17292
liver, cells, inclusion bodies in,4530
fat, glycogen and protein content during pregnancy,4349
melanin, quantitative comparisons in albino series,1766
spectrophotometric study,1763
mortality, after morphine injection, in relation to cold fronts,10759
northern pine, life history,5231
Mouse (continued)
ova, nuclear and chromosomal vol. after multiple successive mitosis,15062
paratyphoid epizootic in colony,11719
pattern variation, developmental significance,1762
pine, of southern Ohio,5240
pleuropneumonia-like organisms from,15412
pneumonia-virus in Swiss,9948
pocket, from Colorado,5229
positive vaginal smears in spayed,422
red-backed, *Ixodes* from, Alaska,1564
Rickettsia of Q-fever in, factors affecting,8193
seminal vesicles, castration effects, age and degree of development of adrenal X zone as affecting,15019
sensitivity to altitude,4011
sex characters, dehydroandrosterone as affecting,5673
skin, spread of vital dyes in,701
small intestine, wandering lymphocytes in, hist.,15040
sperm cells, maturation,16663
stomach, pylorus, adenomatous lesion, path.,2372
tumors, ascites, fate in lymph nodes,13229
bone, sex-difference in incidence,601
of breast, in breeding and virgin ♀♀,14876
foster nursing as affecting,16832
of breast and lung, in "A" stock,9583
carcinogens as affecting,584, 585
effect on melanophore hormone,4222
Ehrlich, metastases, vs. human cancer,13208
genetics,598, 1761, 3463
growth, methyl salicylate as affecting,8958
growth and metastases,583
in lung and liver, spontaneous and induced, C₂H strain,16830
lymphosarcoma, induced, transplanta-tion,590
multiple, in a sarcoma strain,602
phenanthrene derivatives as affecting,16884
urinary calculi due to estrogens,7536
uterus, estrogens as affecting,592
ventral horn cells and polydactyly in,4335
Mouse-typhoid. (See *Salmonella typhi-murium*.)
Mouth, aciduric bacteria from, identifica-tion,2650
flora,8230
filamentous bacterial,17446
as influenced by dental pastes,4650
by inhibin of saliva,907
phosphatase activity and,5456
fuso-spirochaetosis, systemic reaction,11630
gums, black, caused by melanin, Javanese printers,4300
Lactobacillus acidophilus strains from, vi-ability and maintenance,10093
lesions, avitaminoses as affecting, monkeys,7898, 7894
mucosa, efficiency of antiseptics and germicides on,2104
secretions, technic for study,3770
streptococci from, serol. comparisons,2647
tuberculosis,17361
tumors, leiomyoma, hist.,2378
in small animals,15382
yeastlike organisms in,9703
Movement. (See also *Locomotion*; *Tropisms*.)
of algal cells, factors affecting,6600
analysis of human,471
ciliary, post-pituitary extracts as af-fecting, frog,7550
epinasty, plant hormones as affecting,13990
of potato leaves, chemicals causing,6614
of tomato leaves, induced by methyl ester of naphthaleneacetic acid,12066
grasping, study,240
muscular, voluntary and involuntary. (See under *Muscles*.)
nastic, relation to action of growth hormones, plants,12068
of *Phaseolus* leaves, causes,1406
plant, cinematographic recording appa-ratus,1405
fish, population density as affecting,434

Movement (*continued*)
 protoplasmic. (See *Protoplasm, streaming*.)
 Mucilage, from *Tradescantia*, chem., 1416
 Mucin, gastric, effect on bacterial pathogenicity, fractionation and., 8221
 for meningococcus identification in spinal fluid,11672
 hydration, measurement,9083
 hydrolysis by bacterial enzyme and by vit. C,12643
 stain for,715
 in synovial fluid, origin and rôle, 9158
 Muck. (See also *Bag; Peat; Soil; Swamp*.)
 sulphate production in,15406
Mucor (p.1861²). (See also *Molds*.)
 new species,6354, 11828
rufescens, dist. deser.,11826
 Mucoraceae (p.1861³). (See *Fungi; Molds*.)
 Mucosa. (For specific material see under *Nose, Stomach*, etc.)
 contact-type hypersensitivity in skin vs. diphtheria bacillus culture on excised,15416
 mycoses,4645
 oral, secretions, technic of study, 3770
 pharyngeal, ant. lobe like glandular tissue in, probable function, 2442
 respiratory, vascularization,5890
 Mud, lake-bottom, heterotrophic bacteria,3357
 of Lake Pomoria, biochemical processes in and therapeutic use,17428
 sulphate-reducing bacteria isolation from,6320
Muehlenbeckia (p.1865²) *tamniifolia*, distr. and morph.,4787
Muellerius capillaris, adenomatosis and,17918
 in sheep, Sweden,5091
Mugil (p.1879⁴) *cephalus*, in fresh water,3381
Microcotyle (Platyh.) from,10536
chelo, *Anacamptothrix intestinalis* from,1057
 intestinal parasitic protophyte in,2766
 Mugilidae (Pisces), p.1879⁴
Muhlenbergia (p.1864²), n. sp.,1158
MUIRILIXIUS (Hom.) (p.1875⁵), n. sp.,8785
MUIROLONIA (Hom.) (p.1875⁵), n. name for *Olonia*,8785
 Mulberry. (See also *Morus*.)
 chlorosis, excess Ca causing,8622
 culture, distr. and utilization, Italy,3000
 dwarf (virus), inclusion bodies, 14064
 fasciation,6663
 leaf, as feed for dairy cattle,779
 quality, fertilizers as affecting, 8679
 steaming to destroy silkworm parasites, effects,3232
 regeneration of accessory buds, temp. and moisture as affecting, 6590
Sclerotinia carunculoides on, dist. in U. S. A.,15889
 as silkworm food, location of plant tissue in,3229
nerosa varieties as,3216
 sex of tree vs. nutritive quality, 3217
 stem utilization,8678
 testing quality,3228
 Mulch(es). (See also *Tillage*.)
 effect on soil erosion and water content,17575
 for tomatoes, in greenhouses,1245
 Mule, neurofibroma grafts in,15381
 sex ratio in,3465
 Müllerian duct. (See *Oviduct*.)
Multicaecum tenuicollis, in *Siren*,6716
 Multiple factors. (See *Genes, multiple*.)
Multituberculata (Mammalia), p.1882¹
Muntiacus (p.1883⁴) *lacrimans*, pelage, in Tibet,5223
 (†) *Murchisonia* (p.1872¹) *copet*, transf. to n. genus,14231
Murgantia (p.1875⁵) *histrionica*, anat. and hist. of alimentary syst.,3342
 control of,12204
 Muricidae (Mollusca), p.1872²
 Muridae (Mammalia), p.1882⁴, 1883¹
MURELUS (Nemathelminthes) (p.1870³)
harpespiculus, from *Ochotoma*,17952
Murraytrema (p.1870²) *copulata*,6794
Mus (p.1883³). (See also *Mouse; Rat; Rattus*.)
 in California,18105
 Golgi apparatus in nerve cells, from youth to senility,7110
decumanus, *Capillaria* ova in liver lesions,1572

musculus, acromelanism in,12451
 effect of specific genes on tail ring number,5344
Eimeria spp. in,1587
 encephalitis in, spontaneous infection,15227
 encephalitis susceptibility,15226
 mating system in wild population,1779
 new dominant spotting lethal gene,5338
 pancreatic cells, nuclear size variations in,16987
 a polydactylous strain,5339
 quantitative characters, inheritance,14369
spicilegus, *Leptospira sejei* from,17292
Musa. (See also *Banana*.)
paradisaca. (See also *Plantain*.)
sinensis, fiber and tracheid development,10169
textilis. (See also *Abaca*.)
 mosaic, symptomatology,17776
Musa (p.1878³), sp. poultry cestode uninfected to,10477
 in stables, Dutch E. Indies,3245
domestica, chemoreceptors as affected by poisons,5072
 life history in India,6705
 olfactory response in,10473
 reactions to monochromatic light,6702
vicina, eggs of, number laid,3201
 Muscarine, effect on bronchi,2250
 Musci (Bryophyta), p.1863¹. (See also *Mosses*); *Sphagnum*.)
 Muscicapidae (Aves), p.1882²
 Muscidae (Diptera), p.1877¹
 Muscle. (See also *Exercise; Musculature*.)
 acetylcholine in cardiac, strophanthin as affecting,16787
 sensitiveness during perfusion with Na, K, and Ca,2131
 action currents, during narcosis and excitation, frog,16696
 action potential, changes by selective stim. of nervous system,13096
 in degenerating, factors affecting,5708
 discharge caused by pinching fiber,14752
 distr. during maze learning,7613
 of smooth,469
 activity, accessory movements, analysis,4054
 effect on blood lactic acid,11152
 estrogens and androgens as affecting, rat,3881
 during human locomotion, analysis,471
 mechanics, in running men,2257
 in walking, cat,4049
 O₂ uptake and blood flow during, dog,11151
 patterns during mental work,9437
 physiology, book,1884
 postcentral area ablation as affecting, monkey,12643
 of working man, anatomy and mechanics,14991
 adenylic acid deaminase, claw of crab,10851
 adenylic and inosinic acids, hydrolysis,12681
 amino groups transfer in minced pigeon,9089, 9092
 apparatus for measurement of propulsive forces,3602
 of arm and finger, tension perception in, tonic neck reflexes as affecting,16683
 atrophying, faradic and galvanic stim. as affecting,12643
 biochemistry, lecture,2261
 Ca and Mg in, localization with electron microscope,10876
 cardiac, flavoprotein in,14780
 catelectrotonus, subthreshold, "anticurare" action,9499
 cholinergic receptive substance, contractile mechanism and,11157
 cholinesterase, in myasthenia gravis,13178
 tetanus toxin as affecting,13003
 chronaxie, as influenced by forced breathing,12920
 by Mg, frog,13094
 circulation, effect on tetanus,16715
 exercise as affecting,14778
 clonus, movements in,14747
 coagulation effects,2498
 composition after adrenalectomy, toad,3821
 connective tissue relationship, quadruple stain for,17002

Muscle (*continued*)
 contraction, anaerobic, chem.,2258
 iodoacetic acid and,12643
 metabolism,11155
 blood flow during,7677
 chemical processes during,4040
 duration, temp. as affecting,2251
 force vs. speed,13092
 histamine release during,16706
 as influenced by:
 alcohol, frog,7681
 high O₂,4038
 hydrostatic pressure, *Mytilus*,14750
 quinine,7684
 interaction of slow and fast, cruciatea,7697
 Orbelli phenomenon,7677
 postoral and phasic, intramuscular pressure during,11143
 protoplasmic movement in cells and,4043
 rhythmic variation in height,7682
 secondary wave,7691
 in disease,7870
 of smooth, sliding of fibers,16998
 static effort after effect,11150
 summation by galvanic stim.,11153
 tensionless, heat production during,7687
 tetanic, O₂ uptake during,11154
 by thermal stim.,13088
 contractility, excitability and, frog,7698, 7699
 cranial, morphogenesis in *Amblystoma*,755
 cranio-mandibular, in orang-utan, 8007
 creatine, deth.,12725
 factors affecting,2021
 in paralyzed E-low rats,11159
 cremasteric, atrophy,14748
 cysticerci in, elk,5096
 cysticercosis, in athlete,6726
 damage by toxins,4050
 of diaphragm. (See *Diaphragm*.)
 dorsal interosseous, derivation in mammals,4311
 dye absorption by, frog,2260
 dynamic constants, CO₂ as affecting,12643
 dystrophy, avitaminosis and, rabbits,9625
 nutritional, path., guinea pig,9623
 efficiency, man and animals,7398
 electrical impedance during action of sugar, inorganic cations and narcotics,12643
 factors affecting,11147
 electrical resistance, in pig,9798
 electrolytes, changes during stim and recovery, electrolytes and cortin as affecting,473
 in K-depleted rats,14745
 electrolytes and wt., stretching and stim. as affecting, *Mytilus*, 13098
 electrotonus, stim. and,4052
 end-plate as conductor,5703
 excitability, acetylcholine as affecting,468
 d.c. voltage as affecting,13097
 factors affecting, *Mytilus*,4053
 extensor, anatomy in early tetrapods,16955
 extra-cellular fluid analysis, frog,253
 extracellular space, size,13093
 extract, phosphate transfer enzymes in,12661
 phosphorylating enzyme in, activity,5451
 fat and carbohydrate, stim. as affecting, phlorizined rat,12643
 fatigue, biochem.,474
 as influenced by:
 feeding gelatin,7693
 glysin,13095
 tensionless contractions,7687
 review,474
 fibers, changes due to internal parasite,11428
 excitability, factors affecting,14752
 of local and propagated mechanical response in,2262
 excitatory process in,12643
 Golgi apparatus and vacuoma,2451
 length-tension diagrams, frog, 12643
 morph. and physiol. review, 13087
 per sq. mm. amphibians,666
 ratio to nerve fibers,7954
 smooth, dimensions, rabbit,3969
 striated, in epiphysis cerebri of cattle,11410
 fluid in, impaired renal function as affecting,7341
 frozen, hist.,10872

SUBJECT INDEX

Muscle-Mustard

Muscle (continued)
 function in locomotion,.....4042
 glycogen, as influenced by:
 Cu,.....11256
 hunger and phlorrhizin, rabbits,.....7428
 insulin,.....12643
 localization,.....4361
 phosphorization, of skeletal and heart,.....7675
 glycolysis, inhibition by cytolized brain,.....14719
 heteroplastic transplantation of somites, *Ambystoma*,.....745
 hexosediphosphate in,.....14742
 histamine liberation by curare,.....7674
 imbibition of water from solns. of local anesthetics,.....16802
 incinerated, distr. of inorganic ash,.....4367
 as influenced by:
 acetylcholine, eserine and curare, frog,.....12643, 16641
 acetylcholine and K, frog,.....14799
 smooth and striated,.....14665
 antiseptics, leech,.....13186
 drugs,.....11240
 interrupted direct current,.....16714
 Mg,.....16304
 procaine and cocaine,.....14830
 tetanus toxin,.....16712
 innervation, double, in crustacea, 4024
 reciprocal, asphyxia as affecting,.....11145
 in relation to function, crustacea, 8063, 8064
 of insect antennae,.....10577
 intercostal, end plates, structure, stim. and curare as affecting, lizards,.....7988
 iris, drugs as affecting,.....4045
 ischemia, pH changes after work, 7689
 isoelectric point, effect on infections,.....2589
 isometric tension, length and,.....2257
 juice, succinic acid oxidation by, 7673
 lactic acid, dehydrogenation,.....13090
 formation in scorbutic guinea pigs,.....472
 lateral pterygoid, tendon, comp. anatomy,.....708
 of leg, forces and energy changes during walking,.....4041
 Mg and Ca as shown by electron microscope,.....7695
 of ♂ accessory genitalia, motility, endocrine control, rat,.....16622, 16623
 membrane potentials, organic electrolytes and non-electrolytes as affecting,.....9079
 mental activity and,.....7680
 metabolism, during activity,.....11151
 11152, 11154
 of aerobic working,.....2259
 anaerobic, in mammalia,.....7694
 in diphtheria intoxication, heart,.....1156
 enzymic processes and, high pressures as affecting,.....16709
 as influenced by:
 anesthetics and analeptics,.....4138
 caffeine, heart-lung prep.,.....7748
 insulin,.....12643
 spermin,.....14807
 inhibition by Ca⁺⁺ and K⁺,.....16801
 of isotonically contracted and isometrically fixed,.....16710
 radioactive P in study,.....7685
 relation to double motor innervation, crayfish adductor,.....2249
 at rest and during work,.....16707
 separation with Na azide,.....9505
 review,.....7245
 role of carnosine and anserine in,.....9506
 of oxalate in,.....10968
 microincineration,.....13311
 myasthenia gravis, (See *Myasthenia gravis*)
 myotomes, initiation of contractility, *Salmo*,.....5915
 myotonic, drugs as affecting,.....11231
 -nerve apparatus, Mg salts as affecting,.....12643
 -nerve junction, electrical negativity, high-frequency stim. and, 14717
 facilitation and inhibition at,.....445
 strychnine as affecting,.....11081
 -nerve preparation, electrical phenomenon of post-tetanicly facilitated responses to single volley,.....13074
 excitability, strychnine as affecting,.....7777

Muscle (continued)
 -nerve transmission, fatigue without contraction during curarization,.....9501
 5th stage,.....12643
 nicotinamide in,.....1926
 onchocerciasis in,.....6730
 permeability to dyes,.....10835
 to sugars, frog,.....10840
 urea as affecting,.....5429
 phosphates, detn.,.....4014
 esterification,.....7692
 exchange with blood, insulin as affecting,.....10913
 phosphocreatine, enzymatic breakdown, acetylcholine and strophanthine as affecting,.....402
 and inorganic P, Pb poisoning as affecting,.....11158
 phosphorus, diet as affecting, rat, 2263
 in nutritional muscular dystrophy, rabbit,.....7683
 phosphorylation intensity, innervation as affecting,.....9500
 pigments, changes in,.....10889
 salmon,.....6948
 poisoning, by alkaloids,.....10848
 with moniodoacetic acid, work capacity, intermediary carbohydrate metabolism products and,.....5705
 potassium, conc., vs. K in tumor tissue,.....16862
 detn.,.....14741
 digoxan as affecting, heart,.....7810
 distr. in amphibians,.....7986
 exchange with blood, activity and,.....12643
 liberated during activity, fate, 14743
 pressure and dynamic constants, 12643
 in primary systemic amyloidosis, path.,.....9612
 pronator teres, median nerve in relation to,.....16967
 protein comp., rat,.....9496
 crystallizable,.....13086
 extraction for analysis,.....9128
 resistance to proteolysis in sarcoma,.....9096
 pyramidalis, in American Whites and Negroes,.....706, 15052
 regeneration, in annelids,.....11469
 in *Cottus*,.....11376
 in crustaceans,.....11470
 in frog,.....14997
 respiratory, action potentials under low O₂ and high CO₂,.....12643
 retractor penis, drugs as affecting, dog,.....7783
 review,.....7244
 rigor mortis in, factors affecting, 9808
 sarcolemma, origin,.....11447
 sensitization to K ions by veratrin,.....14739
 smooth, action potentials,.....469
 of appendix, changes in appendicitis,.....9608
 of arteries, tonus, hypertensive plasma as affecting,.....11206
 yohimbine derivatives as affecting,.....5738
 of bronchus, as influenced by:
 Amanita extract,.....5734
 choline derivatives,.....5735
 factors,.....2250
 sympathol,.....5731
 contractions, automatic, glycine as affecting,.....5773
 histamine release during,.....13085
 as influenced by:
 amines related to ephedrine,.....7739
 Artemisia herba alba,.....7762
 congo red,.....11245
 diethylstilboestrol,.....11232
 drugs,.....7813
 epinephrin substitutes,.....13150
 estrogens and drugs,.....9290
 O₂ at high barometric pressure,.....12643
 pervitin,.....7767
 intestinal, as influenced by choline H₂PO₄ esters,.....7761
 by syntran,.....14800
 of iris, sympathomimetic amines as affecting,.....11216
 in mechanics of aorta,.....4082
 protoplasm as visco-elastic system,.....16716
 rectal, nervous control,.....14726
 of soft palate, function and innervation,.....7950
 of urinary passages, structure, 7976
 of uterus, motility cycle, guinea pig,.....7586
 somatic, regeneration in *Cottus*,.....11376
 sphincters, of fish, note,.....14283

Muscle (continued)
 spinal accessory, sensory innervation, rabbit,.....7962
 stapedial, of tetrapods, as relic of levator hyoidei of fishes,.....9679
 striated, changes induced after caffeine immersion,.....5912
 choline esterase in,.....7556
 chondriomes, *Bufo*,.....7987
 histophysiol.,.....16997
 contractions, appearance,.....2253
 Golgi apparatus and vacuoma,.....1729
 sympathetic innervation,.....2435
 trichinae in,.....1551
 tension, effect on:
 blood pressure,.....12643
 memorization ability,.....14693
 palmar skin resistance,.....2254
 postural steadiness,.....7696
 knee jerk as measure,.....7678
 tetanized twitch, factors affecting,.....16713
 tetanus, blood flow as affecting,.....16715
 tissue pressure in, syncope and,.....12643
 tonus, chronaxie and,.....4021
 after pontine section,.....12643
 regulation in gastropods, 7686, 9498
 of striated,.....7690
 study,.....2256
 tremors, relation to brain rhythm, in paralysis agitans,.....2417
 trichinosis in, poultry,.....8700
 vascular beds, smoking as affecting,.....12643
 vasodilatation, heat and exercise as affecting,.....5722
 vit. B₁ in,.....7483
 vocal, insertion,.....13312
 water in, frog,.....2255
 non-electrolytes as affecting,.....3549
 10845
 work, adenosinetriphosphoric acid breakdown during,.....9504
 adrenal stim. by continuous, rat,.....5629
 capacity, physostigmine as affecting,.....9502
 cobra venom and opiates as affecting,.....12643
 nerve discharge and muscle energy variations in,.....4051
 in walking,.....12643
 Musculature. (See also *Muscle*; and specific organs, and body regions.)
 of *Agelena* (Arachnid),.....6859
 shoulder, of mole,.....4360
 skeletal, hist. changes in young of vit. B-low rats,.....13313
Trichinella in, incidence, man,.....3250
Musculium partumelum, new *Cercaria* in,.....10537
 transversum, *Cercaria coelocerca* from,.....17947
 Museum technic. (See also *Mounting*; etc.)
 clearing and staining specimens for demonstration of bone,.....7990
 fixation and preservation of anatomical specimens,.....5918
 Mushroom(s). (See also *Fungi*)
 casing soils for,.....10224
 culture, diseases and pests, Holland,.....2981
 houses, fumigation,.....5043
 of Michigan,.....4739
 synthetic compost for,.....11986
 Muskeg(s). (See *Bogs*)
 Muskmelon. (See also *Cucumis melo*)
 new hybrid,.....8503
 powdery mildew (*Erysiphe cichoracearum*), inheritance of resistance,.....1482
 spraying, with insoluble Cu compounds,.....3161
 Muskrat. (See also *Fiber*; *Ondatra*)
 Giardia in,.....6773
 insensitivity to CO₂,.....3781
 Schizotaenia (cestode) in,.....12298
 Musophagidae, turacin in plumage, analysis,.....10923
Mussaenda (p.1867³), tax.,.....1129, 15509
 Mussel(s). (See also *Clams*)
 in food poisoning,.....11687
 seasonal and altitudinal distr. in region of East Alps,.....1852
 Must. (See under *Wine*)
 Mustard. (See also *Brassica*; *Sinapis*)
 as cover crops, California,.....1260
 Mustard gas, effect on glycolysis of tumors,.....13231
 on immunol. properties of proteins,.....3098
 toxicity, rabbit,.....11217
 Mustard oil, sensitization to,.....873

- Mustela* (p.1883²). (See also *Ferret*; *Marten*; *Mink*; *Weasel*.)
 enemy of *Ochotona*, 5222
frenata *frenata*, notes on, 5280
nevadensis, gestation period, 5222
 nest of, 14312
novboracensis, attacking rabbit, 14312
 trailing a rabbit, 18105
rizosa allegheniensis, in Virginia, 5243
siberica, influenza virus transmission to, 8308
 vision blood O₂ transports, 12643
 population decline, 5222
 ova, 59
Mustelidae (Mammalia), p.1883²
Mustelus (p.1879³), n. sp. and key, 10628
 specific names of American vs.
 European spp., 6956
canis, CO₂ transport by blood, 3629
 color changes in, theories, 11073
 Mutant, chlorophyll defective, mineral
 metabolism in, *Petunia*, 10315
 Mutation. (See also *Chimera*; *Dissociation*,
microbic; *Evolution*; *Genetics*;
Heredity; *Variation*.)
 in blood-group rise and spread, 17229
 bud, in Portuguese pear and apple
 vars., 14361
 in *Chrysanthemum*, 8499
 for crinkle leaf, 5324
 dominant spotting lethal in *Mus*
musculus, 5338
 in *Drosophila ananassae*, 1725
 in etiology of tumors, 13200
 for flower color, *Camelia*, 5308
 in fox, platinum coat, 17115
 gametophytic, x-ray-induced, *Physcomitrium*, 64
 induction, by cosmic radiations, 7144
 by fast neutrons, *Antirrhinum*, *Myosotis*, 1738
 in fruitfly, 805
 by ionizing radiations, 5305
 quantum relations, 8368
 by temp., *Antirrhinum*, 10713
 by ultraviolet, *Chaetomium*, 16179
Trichophyton, 16168
 by x-rays, *Apocynum*, 1387
 irreversible, distr. of gene frequencies
 and, 1737
 linkage of two, white lupine, 8942
 minute, effect on development, *Drosophila*, 7135
 mottled eye, inheritance and expression,
Drosophila, 1782
 in *Oenothera* hybrids, 5330
 in Provence wheat, 1744
 rate, temp. and, *Drosophila*, 88
 recurrent, to curly, rat, 12551
 reverse, to agouti in rat, 1767
 role in evolution, 12500, 14341
 book, 14313
 wing, interaction, *Drosophila*, 1783
 in yeasts, 17501
Mutillidae (Hymenoptera), p.1878⁴
Mutillioidea (Hymenoptera), p.1878⁴
 Mutton. (See *Meat*; *Sheep*.)
 Mutualism. (See *Symbiosis*.)
Mya arenaria, muscles in double innervation, 4024
Myasthenia gravis, choline esterase in
 muscle in, 7553
 in tissues in, 18178
 vs. thyroidism, 9644
MYCELOCHYTRIACEAE (Fungi)
 (p.1861²), 17490
Mycena (p.1862³), tax., 8398, 11825, 11827
Mycetophilidae (Diptera), p.1877³
Mycetozoa (Prot.) (p.1868³). (See *Myxomycetes*.)
Mycobacteria. (See also *Bacteria*, *acidfast*;
Mycobacterium; etc.)
 precipitins for tuberculin proteins, 9870
Mycobacteriaceae (Bacteria), p.1861¹
Mycobacterium (p.1861¹). (See also
Bacteria, *acidfast*.)
 acid-alcohol-fast form from water, 2746
 antiformin- and acid-resistance of
 pathogenic vs. saprophytic
 forms, 8277
 antigenic relationships and methods, 8116
 infections by unusual forms, 6185
 rat-leprosy form, infection tests, 4654
 zonation of forms compared in culture, 8356
avium, death, mechanism, 18708
 in apparently pure cultures of diphtheroids, 11639
 biological characters, 6247
 in bovine abortion etiology, 15364
 differentiation by precipitin test, 9870
 dissociation, 1014, 6247
 in dressed poultry, 1012
Mycobacterium (continued)
avium (continued)
 in goat udder, 1014
 as influenced by:
 anaerobiosis and desiccation, 13708
 low temp. multiple changes, 11691
 sulfone derivatives, 11603, 11604
 monograph, 6231
 mycolic acids of wax, 17444
 susceptibility of golden hamster to, 17297
leprae. (See also *Leprosy*.)
 culture, by Clegg's symbiont amoeba
 method, 8258
 Duval's chromogenic form, filtration
 trials, 8360
 review, 17306
paratuberculosis. (See also *Johnes*'s
disease.)
 acid-alcohol fastness of tubercle
 bacilli vs., 13600
 differentiation by precipitin test, 9870
 paraffin-oil treated, expt. infection in
 laboratory animals by, 15379
phlei, in butter, pathogenic action (exp.), 18616
tuberculosis. (See also *Bacillus* of
Calmette-Guérin; *Sputum*; *Tuberculin*;
Tuberculosis.)
 acid-fastness independent of cell surface, 9853
 allergy by paraffin-coated, 15158
 antigens independent of cell surface, 9853
 aqueous suspensions of oil-coated,
 prep. and properties, 9853
 association of acid-fast bacteria
 with attenuated and avirulent
 strains, 6175
 cellular reactions to defatted bacilli
 and their products, 902
 chem. comp. and factors influencing, 11791
 conc. method for sputa, 17353
 culture of other acid-fast bacilli vs., 4623
 demonstration by fluorescent dyes, 11575
 detection, historical account, 17374
 diagnosis, by culture vs. inoculation, 2828
 by fluorescence microscope, 8225
 effects of auto- and hetero-reinfections, 9886
 endocarditis of pulmonary valve due
 to, 6190
 Eumycete relations, 2748
 filtrable phase, 8364
 fixation and inhibition of growth,
 extracellular factors in, 8128
 local immunity relations, 8128
 germicides for, 10017
 G-forms, significance, 8364
 growth, as influenced by bacterial
 enzymes, 8235
 by bacterial filtrates, 8235
 metal catalysts for, 10090
 of small nos. in blood and serum, 4711
 heterogenetic antigen in, 2543
 immunization to, by killed bacilli
 vs. B.C.G., 11532
 infection and superinfection, colivaccine as affecting, 2560
 as influenced by:
 digestants, 4623
 diphenylamine, 10090
 orthophenylphenol, 2672
 sulfone derivatives, 11603
 isolation, centrifuging as affecting,
 from contaminated materials,
 media for, 9999
 by culture vs. animal inoculation, 13631, 13632
 killed, reactions in normal vs. immunized rabbits, 11551
 life cycle, 8364
 lipid antigens of *Brucella melitensis*
 and, 11624
 lipid growth factor for, 6298
 local fixation, 830
 medium (new) for isolation, culture
 and dissociation, 4624
 morph. review, 8864
 metabolism, O₂ conc. as affecting, 12643
 mycolic acid isolated from, properties,
 2775
 oxidase in, 10857
 oxidative metabolism vs. O₂ tension,
 17459
 pathogenesis, conc. in suspension
 inoculum and, 6184
Mycobacterium (continued)
tuberculosis (continued)
 polysaccharide, cellular reactions to, 2569
 in raw vs. pasteurized milk, 8338
 recovery from urine, methods, 9987
 resistance to, as influenced by age
 of host, 8153
 by vaccination, 8153
 by virulence, nos. and infection
 route, 8152
 resistance to antiformin and acids,
 saprophytic mycobacteria
 compared, 8277
 riboflavin production by, isolation
 and detn., 2750
 serological grouping of human and
 bovine strains, 914
 tuberculin-sensitization by heat-killed, children, 17134
 spread in sensitized vs. immunized
 animals, 830
 in sputa, diagnostic technic, 8255
 sputum exam. for, flotation method,
 966
 strains from non-tuberculous cases, 9973
 in stools, demonstration method, 8257
 surface properties, 9853
 tuberculin sensitization and antibody
 formation by killed, monkeys, 11520
 types in cattle, Sweden, 2690
 virulence, animal passage as affecting,
 nature, 17315
 numerical expression, 18601
 vole susceptibility to bovine vs.
 human strains, 4626, 17298
 x-irradiation, effect on allergic
 reactions by, 6085
 zonation in Lange's medium, 8356
 var. *bovis*, bactericides tested against,
 11690
 cats susceptible to infection by, 13665
 differentiation by precipitin test, 9870
 dissociation, 13700
 germicidal action of aromatic acids
 on, 15304
 human infection, incidence, 6187
 infection in milk in Turin, 2686
 infection in pigs through feeds, 4675
 nephric tuberculosis incidence of
 human form vs., 13603
 specific and group antibodies produced
 by S vs. R phases, 13479
 polysaccharides, specific and non-specific, 8136
 sensitization, antibody formation
 and lesions induced in
 exp. infections, 9852
 spontaneous infection in monkeys, 11708
 susceptibility of golden hamster
 to, 17297
 wax chemistry, 2752
 var. *hominis*, acetone extract, effect
 on isolation and virulence, 6083
 aldehyde inducing tuberculin-type
 reaction from fat and filtrate, 13704
 antibodies reacting with, production
 by bovine tubercle
 bacilli, 13479
 bactericides tested against, 11690
 death, mechanism, 13708
 differentiation by precipitin test, 9870
 dissociation, 13700
 germicidal action of aromatic acids
 on, 15304
 immunization by heat-killed, 9879
 as influenced by anaerobiosis and
 desiccation, 13708
 nephric tuberculosis incidence of
 bovine form vs., 13603
 polysaccharides, specific, 8136
 spontaneous infection in monkeys, 11708
 spontaneous lysis, 4625
 susceptibility of golden hamster
 to, 17297
 variants induced by lysis, 4625
 wax fractions, chem., 2779
Mycobionia (p.1862³) *flava*, emend., 11820
Mycoderma decolorans, from pickle brines, 17405
 Mycolic acids, of tubercle bacillus, 2775
 17444

- Mycology. (See also *Fungi*.)
 correlation of laboratory and field study, 15441
 industrial, book, 10059
 medical, of Argentina, 9981
 monograph of Tuberales (Engler and Prantl), 8390
 photography in, technic, 7060
 textbook, 13729
 Mycorrhiza, of conifers, reciprocal relationship, 7213
 of cotton, 11945
 development on water-washed soils, 10245
 effect on growth of shortleaf pine seedlings, 10786
 formation, stimulating effect on higher plants, 16259
 fungous, morph., cultural characters and phylogeny, 15438
 growth, aneurin and biotin as affecting, 12078
 of Indian Ophioglossaceae, 4756
 orchid, specificity in relation to symbiosis, 10779
 on pines, benefits of soil inoculation, 3169
 of red pine, relation to environment and health of tree, 3169
 relation to growth of tree seedlings, 15674
 Mycosis(es). (See also *Actinomyces*; *Aspergillosis*; *Blastomycosis*; *Moniliasis*; and under organisms producing mycoses, e.g., *Monilia*.)
 autogenous vaccine therapy, 4485
 cutaneous, *Cladosporium* associated with, 18619
 etiology, 4645
 equine, cauterization for, 11731
 and fungi causing, Batavia, 4633
 mycology and statistics, China, 9980
Sporobolomyces pollacii associated, 4637
 stain technic, 8248
Trichophyton immersens relations, 4643
 of fowls, 2697
 fungoides, bone marrow studies, 11317
 path., case studies, 11642
Trichosporon-induced, 4645
 vaccines for, prep., 4485
Mycosphaella (p.1861⁴), n. spp., 2811
 culture media for, 17495
 on peanut, control, 17835
 strawberry leaf spot (new) due to, 3169
berkeleyi, development, 10113
lethalis, on sweet clover seed, 17750
Mycotodea (p.1861⁴), n. sp., 15453
Mycotorula (p.1863⁴) *albicans*, carrot rot due to, 12130
 etiological relations and strains compared, 4636
 from homemade bread yeast, 4646
 synonymy, 4636
 variation and dissociation in strains, 9976
 Myctophidae (Pisces), p.1879³
Myctophus (p.1879³) *lateratum* (*Diogenichthys*), 16049
 Mydriasis. (See *Eye, pupil*.)
 Mydriatics, action, sympathetic innervation and, 5771
 Myelencephalon. (See specific parts, e.g., *medulla oblongata*, under *Brain*.)
 Myelitis, in schistosomiasis, treatment, 15961
 Myeloblast. (See under *Hematopoiesis*; *Leucocyte*.)
 Myelocyte. (See *Leucocyte*.)
Myelophilus (p.1876⁴), spp. on pine, loss due to larvae, 10429
piniperda, damage done to pine trees, 10429
 Myeloses, blood cholesterol and splenic hormone in, 4254
 Mygalomorphae (Arachnida), p.1874⁴
Myginda (p.1866⁴), n. spp. and n. comb., 15504
Myiagra (p.1882⁴) *cyanoleuca*, described, New Guinea, 7022
Myiarchus (p.1881⁴), food habits, 9064
 n. subsp. and n. combs. in, Peru, 7036
 Myiasis. (See also *Fly*.)
 in cattle, causal insects, and prophylaxis, 15923
 due to *Cochliomyia*, calves, Brazil, 3203
 fowl, due to *Lucilia eximia*, 15922
 gastric and intestinal, improbability, 1515
 pH of wounds, in relation to recovery and oviposition (*Cochliomyia*), 8659
 sheep and goats, 3200
 percentages due to *Cochliomyia* and *Phormia*, 5056
 trapping and oviposition of *Cochliomyia*, 15918
Myiodynastes (p.1881⁴), food habits, 9064
 Mylabridae (Coleoptera), p.1876⁴
Mylabris obtectus. (See *Acanthoscelides obtectus*.)
Mylia (p.1863⁴), n. combs., 4752
Mylohyus (p.1883⁴) *exortivus* (P.), from Tennessee cave, 12443
 Myocarditis. (See also *Heart*.)
 electrocardiographic changes, 9508
 granulomatous, 2359
 mortality, by age groups, statistics, 13640
Myocastor coypus, expl. echinococcosis in, 12248
Myodopsylla, on *Myotis velifer*, 12458
 Myofibrils. (See *Muscle fibers*.)
 Myopia, inheritance and consanguinity of parents, man, 3470
 review, 9459
 statistical analysis, in children, 2340
 sulfanilamide causing transient, 15212
Myoporum (p.1867⁴) *humile*, embryogeny and relationships, 4306
 Myosin, amino acids in, rabbit, 16483
 of muscles, structure, micellar concept, 17689
 Myosis. (See *Eye, pupil*.)
 Myositis, pyo-, tropical, chemotherapy, 17246
 Myosotis, as affected by fast neutrons, 1738
Myotis (p.1882⁴) *becksteini*, communication among, 12454
daubentoni, *Nycteteribia pedicularia* on, 10443
l. lucifugus, notes of, 5244
thysanodes, in British Columbia, 5240
velifer, occurrence in California, life hist., 12458
 Myotonia, congenital, of goats, drugs affecting, 2312
 drugs as affecting, 11231
 Myriangiaceae (Fungi), p.1861⁴
 Myriangiales (Fungi) (p.1861⁴), systematic position, 6350
Myriangium (p.1861⁴), development of fruit body, 6350
 Myrica (p.1865⁴), Oligocene, of Germany, 4724
asplenifolia, root nodules, mechanism of formation, 17439
 gale, symbiosis with actino-mycetes, 12596
salicifolia, descr. and distrib. in E. Africa, 13767
 Myricaceae (Dicotyledones), p.1865⁴
 Myricales (Dicotyledones), p.1865⁴
Myrichthys (p.1879³), spp. notes on, 5160
 Myriopoda (p.1873⁴), as intestinal parasite, 6729
 spirostoptoidea, morph., 16013
 Myristica, keys, 4780
 Myristicaceae (Dicotyledones), p.1865⁴
Myrmecodia (p.1867⁴), spp. leaf, stem and flower morphology, 2916
Myrmecophaga (p.1882⁴) *hubata* 10 mm embryo with placenta, description, 17045
 Myrmecophagidae (Mammalia), p.1882⁴
 Myrmecophile, in ant nests, 3854
 plants, *Endospermum* as, 3488
Myrmica rolandi, in East Baltic region, 18026
 Myrobalan, oil and tannic acid from, extraction and uses, 4907
 Myroporaceae (Dicotyledones), p.1867⁴
 Myrsinaceae (Dicotyledones), p.1866⁴
 Myrtaceae (Dicotyledones), p.1866⁴
 Myrtales (Dicotyledones), p.1866⁴
 Myrtiflorae (Dicotyledones), p.1866⁴
Myrella (p.1872⁴), larva described, 3301
 Mysidacea (Crustacea), p.1873⁴
Mysidia (p.1875⁴), n. spp., 8785
Mytilicola (p.1873⁴) *intestinalis*, in North Sea, morph., 16017
 ostreae, in oyster, 3310
 Mytilidae (Mollusca), p.1872⁴
Mytilidion (p.1861⁴) *karstenii*, *Septonema* assoc. with, 11819
Mytilus (p.1872⁴), functional anatomy of bivalve, 10560
 growth, in relation to salt content of water, 12581
edulis, anterior retractor of byssus, wt. and electrolytes, stretching and stim. as affecting, 13098
 ecology, 10774
 in food poisoning, 11687
 muscle, excitability study, 4053
 tissue salt conc., 9152
 gill, effect of hydrostatic pressure from ciliary frequency, cardiac rhythm and muscular contraction, 14750
 Myxedema. (See also *Thyroid gland*.)
 ascites and, 4278
 blood volume in, 2267
 capillary filtration in, 2281
 clinical study, 4280
 due to pituitary fibrosis, vs. Simmonds' disease, 5353
 electroencephalogram, 11355
 sternal marrow in man, 11386
 thyroxin as affecting, 5363
 thyroxin decay vs. I response in thyrotoxicosis, 9651
 vit. C metabolism in, 2071
Myxicola (p.1871⁴), syn., 17962
 Myxobolidae (Protozoa), p.1869⁴
 MYXOCOLLARIA (Fungi) (p.1862⁴), 11825
 Myxomatosis, infectious rabbit, a complex infection, 16905
 pathogenesis, immunizing agents as affecting, 15146
 serological relation to Shope fibroma, 9268
 soluble antigen, 2567
 virus tissue culture and immunization, 2617, 9371
 Myxomycetes (p.1861⁴), electric potential of plasmodium, heteroauxin as affecting, 15718
 flagellum structure in, 1586
 growth and development in culture, 6362
 of India, 2811
 plasmodia, color, 15472
 swarm cells, reactions of, 6361
 temp. reactions of swarm-cells, 1085
 Myxophyceae (p.1860⁴). (See also *Algae*; *Plankton*.)
 Myxosporidia (Protozoa), p.1869⁴
 on *Coregonus*, Europe, 3396
 in goldfish, China, 17926
 in Pacific salmon, 10521
Myxomela (p.1882⁴) *nigra*, life history, Victoria, 5169
 seasonal migration, nesting habits, Australia, 5187
Myzostoma (p.1871⁴), n. spp., 3290
 Myzostomida (Annelida), p.1871⁴
 Myzostomidae (Annelida), p.1871⁴
Myzus persicae, injury to potato, N. Y., 17873
 as vector of sugar beet yellows, 15329
 as vector of turnip mosaic, 8616

N

- Nabidae (Hemiptera), p.1875⁴
Naegleria bistadialis, reaction to light intensity patterns, 432
Naemaphysaria (p.1862⁴), tax., 15464
 Nagana. (See also *Glossina*; *Trypanosoma brucei*.)
 chemotherapy, 11608
 in domestic vs. wild animals, 11750
 Nails, amino acid comp., 7977
 growth, relation to nutrition, children, 16820
 kollonichia, iron as affecting, 649
 types, man, 8025, 11438
 Zn content, 7978, 11338
Naja (p.1880⁴), spp. effect of venom of, 702, 10633, 13174
tripudians, *Ophidascaris* from, 14216
 Najadales (Monocotyledones), p.1864⁴
Nama (p.1867⁴), monograph, 13758
 Nambivud disease of dogs, nature, 14182
 NANATA (Lep.) (p.1877⁴) *substituta*, 8792
Nananthus, lectotypes, 11881
Nannipus (p.1883⁴) *gratus*, skull of (N), 7047
 Nanosauridae (Reptilia), p.1881⁴
Nanosaurus (p.1881⁴), horizon corrected, 5165
Napaeozapus (p.1883⁴), sex dimorphism in, 5222
insignis, new nematode parasite, 17952
 in Virginia, 5222
fructectanus, in Manitoba, 5230
insignis, life history, Vermont, 5251
roanensis, range, Virginia, 5243
 Naphthalene, acetic acid. (See under *Hormones, plant*.)
 chlorinated, effects, 5372
 metabolism, rat, 135519
 derivatives, metabolic fate, dog, 13140
 sulfonic acids, saponin-like action, 16772
 in separation and detn. of amino acids, 16334
 Naphthol-β, in trichinosis therapy, 8713

- Naphthoquinone, 2-methyl-3-hydroxy-1, 4.
(See *Phthiocol.*)
Naphthylacetic acid, toxicity,14786
Naphthyl ethers, effect on mitosis.
Triticum,12503
Naphthyl isothiocyanate, as insecticide.
dermatitis due to,15935
Napothera (p.1881⁴) *crispifrons calicicola*,
10638
Narcissus, basal rot, soil disinfection
by H₂O,3169
hot water treatment, effect of adding
chemicals,5010
recommendations for,5011
mosaic (virus), insect vectors,14057
stripe disease (virus), hist. and virus
components,1435
white streak, new virosis, 17789, 17779
Narcissus. (See also *Daffodil*.)
bulbs, insect pests, control by vapor-
heat treatment,12196
Sclerotinia polyblastis on,15447
storage temp. as affecting,13892
Narcissus bulb fly. (See *Merodon*
equestris.)
Narcoplepsy. (See *Psychoses*.)
Narconumal, effect on vasomotor reflexes,
16752
matabolic fate,13178
toxicity, rabbit,16766, 16767
Narcosis. (See also *Anesthesia*; *Narcotics*.)
electrical,14466
action currents in limbs during, frog,
16696
galvano-, dyes affecting,535
excitation state, frog,16704
frogs,2228
Narcotics. (See also *Anesthetics*; *Narcosis*;
and specific narcotics and anes-
thetics.)
effect on:
colon secretion,363
electrical impedance of muscle, 11147
12643
heat formation in brain,7760
Panoeolus campanulatus var. *sphinctrinus*
as,13971
Nasilio (p.1882²) *brachyrhyncha*, dentition,
5233
Nasopharynx, lymphatic absorption from,
9153
Nassa obsoleta, *Stephanostomum tenue* in,
15986
Nastic movement. (See under *Movement*.)
Natantia (Crustacea), p.1874¹
Naticidae (Mollusca), p.1872²
Natrix (p.1880⁴), blood cell morphology
and blood coagulation time,5884
sipedon, new Trematodes from,17930
stolata, *Eimeria* in,6770
Natural science, history and rôle of mathe-
matics in,12462
Natural selection. (See *Evolution*;
Selection.)
Naturalists, American, handlist,1685
Navoora (p.1862²), taxonomy,11825
fulgens, from peat,1075
Naucoridae (Hemiptera), p.1875²
Naucoris (p.1875²) *cimicoides*, anatomy
monograph,10602
Naupactus leucoloma, larvae in soil, control,
5025
Nautiloidea (Mollusca), p.1872⁴
Naupaedium (p.1880⁴), spp. described,
12421
Naval stores, utilization,13842
Navarretia (p.1867¹), n. var.,4797
Navicula (p.1860²), n. spp.,8376
Naviculaceae (Algae), p.1860²
Neanthe, for genetic study,8929
Neanthes (p.1871²), of northeast Pacific,
1607
Nebria (p.1876⁴), key, spp. of north-
western N. America,17992
Necator. (See also *Hookworm*.)
in natives, Nigeria,8690
americanus, eggs, specific gravity,8708
incidence, Cuba,6720
Neck, innervation by cutaneous branch
from cervical plexus,684
tonic reflexes, effect on perceptivity of
tension in arm and finger
muscles,16683
and labyrinth reflexes,4298
webbed, in syndrome of infantilism, 652
Necrosis. (See also *Degeneration*.)
fat, relapsing febrile nodular, case,
14875
multiple, in spleen, clin. path.,5726
skin, by staphylococci toxin,4501
Nectar. (See *Honey*.)
Nectariniidae (Aves), p.1882²
Nectria (p.1861⁴), tax.,15453, 17500
basswood canker due to, quantita-
tive infection relations,3169
cankers, in hardwood spp., infection
channels,10369
cinnabarina canker, in Connecticut
forests,3164
trachylaena,8407
Necturus (p.1880²), anatomy, guide book,
16954A
gastric secretion in,12643
lymphatics and associated blood-
vessels, development,9686
maculosus, thymus, morphology,9695
Née, redescription of ferns collected by,
1097
Needles, platinum, gas burner for use
with,4720
Negatheriidae (Mammalia), p.1882²
Negri body(ies). (See under *Inclusion*
bodies.)
Negro(es). (See *Man, races*.)
Neisseria (p.1861²), specific substances,
effect on Walker tumor no. 256,
rats,4196
infections by, chemotherapy,9985
serobiological management,9985
medium for isolation and growth,2755
catarrhalis. (See *Micrococcus c.*)
gonorrhoeae. (See also *Gonorrhea*.)
antisera, production and properties,
8140
arthritis due to, sulfanilamide
therapy,2658
bactericidal power of blood for,
sulfanilamide as affecting,15196
chemotherapy, in vitro,13546
culture, in Tyrode-serum mixture,
11654
vs. smear tests for,11661
factors influencing exp. infection,15264
fever induced by, heterobacteria and,
883
fistulous knotty genital elephantiasis
and,11638
growth, as influenced by particulate
C,15415
by silver foil,4664
as influenced by sulfanilamide,9992
15198
by sulfones,17262
meningitis due to, incidence and
diagnosis,4632
non-specific local immunity to, 13397
polycyrtitis case due to,6197
skin reactions to filtrate extract,
6094
to vaccine,2534
sulfanilamide therapy of infection by,
blood and urine content in,
9923
in surgical infections, chemotherapy
by sulphonamide compounds,4553, 4554
survival in collodion sacs in vivo,
17146
thermal death time, at fever temps.,
4652
toxicity reduced by ketene,9959
toxin, effect on laboratory animals,
8140
extraction method,8140
sulfanilamide protective effect
against,806
vulvovaginitis due to, chemotherapy
by sulphonamide prep.,6132
hemolysans,2776
intracellularis. (See also *Neisseria menin-*
gitidis; *Meningitis*.)
antibacterial sera, prep. of purified,
4439
antisera, agglutinative titration of
types I and III with encapsu-
lated bacteria,876
complement-fixing activity vs.
prep.,2579
titration, mouse protective unit
for,804
atypical strain from meningitis case,
9971
bacteremia due to, in pregnancy,
17309
bacteriophage adaptability,2626
chemotherapy of infections,9914
coconut milk media for,4707
culture filtrates, protective value of
antisera negative,4480
cultures from immunized horses com-
pared,6036
filtrate, effect on mouse sarcoma
180,2357
identification in spinal fluid, gastric
mucin for,11672
Necturus (continued)
intracellularis (continued)
increase of *Shigella dysentery-in-*
duced fever by minimal
amounts,9878
as influenced by:
embryonic tissue,11558
sulfanilamide,2656
sulfapyridine,17271
pathogenicity, gastric mucin as af-
fecting,8221
specific receptors,821
in surgical infections, chemotherapy
by sulfonamide compounds,4553
serological differentiation of types,
8163
toxic filtrates, properties,4510
toxicity reduced by ketene,9959
vaccines for, prep.,4468
meningitidis, particulate C as affecting,
15415
Neisseriaceae (Bacteria), p.1861²
Neisser-Wechsberg phenomenon. (See
Complement, deviation.)
Nelson, Edward Milles, biography, 14326
16146
Nemachilus kessleri, in malaria control,
India,15951
Nemacladus, notes,10136
Nemalonales (Algae), p.1860⁴
Nemastomaceae (Algae), p.1860⁴
Nematocyst, in alimentary canal of aeolid
molluscs,8740
Nematoda (p.1870³). (See also *Helminth-*
osis; *Helminths*.)
aquatic, culture method,3282
in captive monkeys, life history, 15955
cell inclusions in,15993
in centrarchid fish, Florida,15948
from Chinese water deer, London, 1604
development of resistance to, sheep,
14159
in dog and cat, Egypt,10480
on edible fungi, bibl.,8646
exptl. infection of lambs, nutrition as
affecting,6728
goblet cells of chick as affecting,6127
homogenic vs. heterogenic lines of
Strongyloides,17953
of horses, Hawaii,17897
immunity to, specificity,6130
incidence, Florida,6742
integument, hist. and permeability,
17949
intestinal, immunity to, nature and
mechanism,15176
of Japanese fish, book,6803
larvae, destruction by fungi in culture,
14172
in intestinal nodules, cattle, Bulgaria,
10500
life histories,15997
in marine fishes,10496
parasites of *Simulium* spp., Canada,
15930
parasitic, chapter, lab. manual,10498
of water birds,3246
plant parasitic. (See also under genera,
e.g., *Ditylenchus*, *Heterodera*.)
Arthrobotrys as parasite of,6642
control,1465
on *Gerbera*,10416
excised roots and shoots attracting,
17770
of Libya,8607
of poultry, Hawaii,10478
of sheep and cattle, U. S.,17907
of urodeles, Louisiana,6716
in varying hare,1564
Nematoderma (p.1869²), validity of generic
descrip. questioned,1602
Nematodirus (p.1870²), in *Hydropotes*,
1604
Nematognathii (Pisces), p.1879³
Nematomorpha, p.1870⁴
Nematoplaca, plasmodesma absent,8377
Nematostigma (p.1861⁴), n. spp.,17500
Nematotaeniidae (Platyhelminthes),
p.1870⁴
Nemeritis (p.1878²), olfactory conditioned
response,5681
canescens, on greater and lesser wax
moth,15937
Nemertea (Platyhelminthes), p.1870⁴
Nemesia (p.1874²), n. spp.,6847
Nemestrinidae (Diptera), p.1877³
Nemocera (Diptera), p.1877²
Nemophila (p.1867²), spp. referred to,
17520
Nemorhaedus (p.1883⁴) *griseus*, pelage, in
Szechuan,5223
Nenia (p.1876²), n. sp.,10595
Nempella (p.1864⁴), n. spp.,11864
Nenia (p.1872²), n. sp. and n. subg., 10566

- NENISCA** (Moll.) (p.1872³), new subg. of *Nenia*,10566
- Neonistea* (p.1874³) *agilis*, gynandro-morphism,3317
- Neonarsphenamine**. (See also *Arsphenamine*; *Arsenic compounds*.)
- in amoebiasis therapy,11611
- in brucellosis urinary tract infections,15276
- in coccal urinary tract infections, 18534
- effect on normal vs. syphilitic sera,15273
- sensitivity to vit. C and,6035
- in spirochaete infections,824
- spirochaetocidal action, molecular O₂ as affecting,17244
- in syphilis,15179
- comparisons,17264
- in trichinosis therapy,8713
- Neobisiidae* (Arachnida), p.1874¹
- Neobistum* (p.1874¹), n. spp.,6858
- NEOBRYCHYARA** (Col.) (p.1876³)
- NEOCARDINA** (Crust.) (p.1874³) denticulata, n. comb. and n. ssp.,12326
- Neocenchrea* (p.1875³), n. sp.,8785
- Neoccephalobus* (p.1870³) *peruensis*, infesting rhizomes of ginger,17772
- Neocinnamomum* (p.1865³), n. spp.,11876
- Neocurtilla hexadactyla*, *Nyctotherus* in intestine, Brazil,12278
- Neodeutopsis* (p.1878³), n. sp.,6894
- Neodiprion tsugae*, new ichneumonid flies parasitic on,18025
- Neoheggeria* (p.1875³), key, and discussion of *N. verbasci*,18034
- NEOHEMIGASTER** (Dipt.) (p.1877⁴), n. name,14254
- Neohipparion molle*, teeth, as guide fossils,5084
- Neolastoptera* (p.1877³) *hibisci*, larvae injuring *Lilium* sp., N. Y.,12194
- Neolitsea involucreata*, fats in seed and fruit-coat, chemistry,10291
- Neomeris* (p.1860³) *alternana* (Ter.),17482
- Neomys longicornis*, seasonal occurrence off Plymouth,1850
- NEOPACHYTYPHIUS** (Col.) (p.1876³) squamosus,8769
- Neopeckia* (p.1861³), n. sp.,15453
- Neopentyl chloride, anesthetic action,13178
- Neoplasm**. (See *Tumor*.)
- Neoprontosil*, effect on bacterial toxins in vivo,11580
- in gas-gangrene (exp.) therapy,17260
- Neorautanenia*, note,10147
- NEORHYNCHOPLEX** (Crust.) (p.1874³)
- Neoryctes* (p.1876³), n. sp.,6883
- Neoschongastia* (p.1874³), n. spp. from New Guinea,17980
- as vector of typhus,984
- NEOSCOPELARCHOIDES** (Pisc.) (p.1879³) dentatus,10619
- Neospirochis* (p.1870³), syn.,6788
- Neosporidia* (Protozoa), p.1869³
- NEOSPURCEA** (Dicot.) (p.1866³),2881
- Neostibosan*, cerebro-spinal fluid trypanocidal after,2304
- effect on white blood picture,822
- in kala azar therapy,822
- Neosynephrine*, effect on:
- blood Ca and coagulation,13178
- heart-lung prep.,2292
- iris,4045, 13155
- nictitating membrane,5730
- Neotermes erythraeus*, flagellate in,12284
- NEOTHYONIDIUM** (Echin.) (p.1872³)
- type *N. hawaiense*,3294
- Neotoca* (p.1879³) *bilineata*, reproductive cycle,16057
- Neotoma* (p.1882⁴), tax., 7046, 8857, 18096
- cinerea*, in California,18105
- floridana attenuata*, ecology, range, 5236
- in Missouri,5219
- Neotremata* (Brachiopoda), p.1871¹
- NEOURACANTHUS** (Col.) (p.1876³)
- nigroterminatus*,10595
- Neovossia* (p.1862³), n. comb.,2811
- Nephelochloa* (p.1864³), anomalous inflorescences,17514
- Nephelometer(s)*, for measuring clay in suspension,4858
- photoelectric, for bacterial metabolic studies,11790
- in detn. of weights vs. counts of microorganisms,1060
- turbidimeter, descr.,14486
- Nephelometry*, for bacterial agglutinations,842
- turbidity of systems, detn.,16389
- Nephridiacaanthus* (p.1870⁴) *kamerumensis*, in cat,3285
- Nephridium(ia)*. (See also *Kidney*.)
- development in chordates and prochordates,9761
- structure in *Hirudinaria* (leech),12305
- Nephritis**. (See also *Kidney*; *Nephrosis*.)
- acute, cardiac failure and,481
- treatment,3947
- allergic irritability in,15265
- ascorbic acid in,2325
- blood changes in, causes and therapy,11319
- chronic, edema, salts as affecting, 2134
- treatment,2148
- glomerular function in,406
- glomerulo, acute, chemotherapy, 18551
- effect on complementary activity,9859
- clinicopath.,2135
- effect on Hb production, dogs,7889
- hypertension and,11190
- hematuria, vit. C as affecting, infant,11267
- hyperpolypeptidemia in,7344
- hypertension and, book,16646
- interstitial, acute hematogenous,2147
- in dog,14668
- nephrotoxic, diet as affecting,11092
- protein elimination in,2136
- pyelo-, relation to focal infections elsewhere,11577
- rheumatic fever and,2149
- uric acid in blood and urine,3941
- volatile reducing substances in blood and urine,9631
- xanthoproteic and indican blood reactions in,17385
- NEPHROCEPHALIN** (Dipt.) (p.1877⁴), n. tribe in Dorylidae,10598
- Nephrolepis* (p.1863³) *undulata*, in Rhodesia,8423
- Nephrolithiasis**. (See *Calculus*.)
- Nephrosis**. (See also *Kidney*; *Nephritis*.)
- acacia as affecting, children,7819
- amyloid, clin. path.,7859
- causation,2141
- effect on blood protein size,16645
- lipoid, clinicopath.,2135
- treatment,9403
- urea-creatinine clearances in,2137
- Nephthyidae** (Annelida), p.1871¹
- Nephthys* (p.1871¹), tax.,17962, 17963
- Nereidae** (Annelida), p.1871¹
- Nereis** (p.1871¹), egg, ultra-violet stim., Mg ion and,7257
- referred to *Ceratonereis*,17962
- diversicolor*, brain secretory cell,9395
- locomotion, kinetics,14744
- limbata* spawning reaction and integration,9451
- Nereocystis* (p.1860⁴), pits in hapteres,4728
- Nerium oleander*, rooting of cuttings, heteroauxin as affecting,15715
- Nerve(s)**. (See also *Nerve cells*; *Nerve ganglion*; *Nervous system*; *Nervous tissue*.)
- ablation in fat tissue, effect on fat deposit,9200
- accessorius, section changes in extrapyramidal nucleus and fibers after,4331
- acetylcholine in, crayfish,11084
- and synthesis,11079
- acetylcholine and adrenalin liberated by stim.,14658
- action currents, stimulating currents and,9485
- action potentials, in cutaneous sensory nerves,7673
- propagation and extension across nonresponding internodes,9483
- rhythmical and non-rhythmical, 2242
- to adrenal medulla, cat,16976
- afferent, excitation by jejunal distention,12643
- anastomosis, studies,4008
- ansa of Wrisberg, connections,681
- aortic. (See *Nerve, depressor*.)
- auditory, stim., effect on encephalogram during sleep,16690, 16691
- autonomic to adrenal gland,16979
- electrical and humoral stim., effects,2235
- threshold values for,2234
- unusual variation in,17058
- axon, diams., relation to spike dimensions and conduction velocity in A fibers,14718
- in legs of decapods,466
- axoplasm, electrolytes in, squid giant nerve fibers,16293
- bundles, perineural sheaths,11389
- cardiac. (See *Nerve, vagus*.)
- Nerve (continued)**
- cervical sympathetic, effect on function of thyroid, rat,16635
- effect of stim. on blood sugar, 10907
- chemical mediators, liberation by stim.,12643
- chorda tympani, stim., effect on salivary secretion,12643, 12898
- chronaxie. (See also *Nerve, excitability*.)
- changes in tonus and,4021
- in circulatory disturbances,4019
- as influenced by:
- evipan,13177
- local anesthetics,4026
- nerve section,14795, 16701
- in myelinated fibers,14712
- use in evaluation of local anesthetics,9561
- to coccyeal lymph hearts in amphibia,15014
- cochlear, peripheral endings,4001
- conduction, circuit theory,12643
- with distributed capacitance,4036
- to doubly innervated crustacean muscle,5702
- electrical impedance of squid giant axon during activity,12643
- impulses, afferent, conditioning by reflex discharges over dorsal roots,16705
- chemically initiated, factors determining frequency,12643
- frequency, vasomotor reflexes and,4009
- initiation in axons,16694
- motor, localization in C.N.S., 4008
- muscle energy variation and, 4051
- propagation and extension of action potential across nonresponding internodes, 9483
- transmission, and effect of narcosis upon nerve fiber,14735
- fatigue,9501
- local circuit theory, 4017, 12643
- nicotine in detection of type,13002
- role of adrenals in,9371
- as influenced by:
- alternating current,4027
- diam. of nerve cephalopods,4023
- glucose soln.,447
- isotonic salt-free solns.,447
- in neurochords, *Lolmireus*,446
- velocity, diam. of fibers and,13077
- electrical resistance outside nerve fibre as affecting,4017
- and spike dimensions, axon diameter and,14718
- cranial, anatomy in *Xenopus*,11379
- creatine in, factors affecting,2021
- cutaneous, branching in twins,9743
- cutaneous colli lateralis, descr.,684
- degeneration, hereditary, clin-geneol. study, man,5357
- in vit. B₁ deficiency,2061
- depressor, section, effect on blood pressure,5718
- stimulation, central, effect on skin,5723
- effect on heart,7704
- by sine-wave alternating currents of low frequency,5697
- drugs as affecting,9568
- electrical impedance, during activity, *Loligo*,11136
- electrolytes in axoplasm, giant squid,12643
- endings, anaphylaxis and,13459
- in human skin, development,11393
- excitability. (See also *Nerve chronaxie*.)
- as influenced by:
- alternating currents,4025
- asphyxia,16702
- local anesthetics,4026
- KCl, CaCl₂, cocaine and NaSCN,14713
- excitation, by high frequency alternating current,13079
- by hypertonic NaCl,11140
- excitation and response, bioelectric studies, review,7244
- excitatory processes and electrical stim.,4035
- facial, mimic paralysis in cerebral tumors,16872
- facilitation processes, retroactive, in electrostatic excitation, 13083
- fibers, adrenergic, adrenalin in,7552
- extracts effect on frog heart, 7554
- B and C,12643
- B type, properties,14720
- preganglionic, properties,12643
- C-type, action potential, polarization as affecting,12643

Nerve (*continued*)
 fibers (*continued*)
 diameter, conduction velocity and,13077
 differentiation in vitro,8041
 in epithelium of vit. A deficient rats,11398
 giant, function, squid,4037
 growing, properties,12643, 13078
 membrane and protoplasm resistance in giant axon, *Loëgo*,11137
 myelinated, chronaxie in,14727
 peripheral, myelinization,13299
 ratio to muscle fibers,7954
 ratios in regenerating,4309
 sensory, ratio of unmyelinated to myelinated, cat,11392
 staining, new Ag method,7992
 structure in genital skin of horse,11395
 fixation method,9712
 heat production, study,464
 hypoglossal, afferent fibers,16972
 origin in human embryo,15066
 section, changes in extrapyramidal nucleus and fibers after, 4331
 impulse. (See under *Nerve, conduction*.)
 infundibular, degeneration without polydipsia,453
 injury, excitability parameter, rheobase and chronaxie changes,4030
 injury potentials of squid giant axon,12643
 limb, regeneration after transection in *Triturus*, *Axolotl*,657, 658
 median, relation to pronator teres,16967
 membrane, resistance, squid giant axon,12643
 stabilization by alkali earths,12643
 membrane potentials, organic electrolytes and non-electrolytes as affecting,9079
 metabolism, *Callinectes*,7662
 review,14440
 motor, facilitation and inhibition at junction,445
 motor and inhibitory, of legs, crustacea,466
 motor end plate, local excitation current at,16719
 muscle preparation. (See *Muscle-nerve*.)
 to muscles of soft palate,7950
 to myocardium in man and cat,9689
 nervous terminalis, development in bats,13328
 oculomotor, section, effect on corneal sensitivity,2210
 olfactory section, effect on water intake, dog,9454
 optic, glioma, clin-path.,14902
 "off" response, excitation and inhibition,12643
 to ovary,687
 pelvic, morph. in man,11399
 peripheral, autoanastomosis,680
 histopath. in vit. B₁ deficiency, rat,11343
 pH and osmotic pressure of injected sol. as affecting,7670
 immuno-biological properties,4509
 myelin changes, polarized light method for study,11430
 peripheral barrier,4509
 perivascular, impregnation method,7996
 phosphates, detn.,4014
 phrenic, central end, action currents in respiratory conditions,9276
 crossed phenomenon,460
 sensory components in cat,11392
 physiology, lecture,4015
 to pituitary gland, man,7956
 plexus, brachial, arrangement, in primates,4376
 cervical, desc. of new cutaneous branch,684
 in human hand,680
 lumbosacral, anatomy vertebral segmentation and,9688
 posterior sacral, anatomy,9688
 pre-sacral, section, effect on uterine distention effect on blood pressure,13104
 regenerating, fiber ratios in,4809
 resistance, interpolar length and, 13072
 response to continuous current, excised nerve and nerve with blood supply,12643
 roots. (See under *Nerves, spinal*.)
 to salivary glands, owls,4328
 sciatic, selective stim. of vasoconstrictor fibers, frog,4010
 section, functional survival, age and,12643

Nerve (*continued*)
 sensitivity changes by transition from non-rhythmic to rhythmic stim.,2242
 sensory, cutaneous, axon potentials in,7672
 role in congenital universal insensitivity to pain,560
 somatic, stim., visceropannicular reflex and,7651
 to spinal accessory muscles and tongue, rabbit,7962
 softening, riboflavin as affecting, hist.,650
 spinal, roots, cervical, intramedullary course,7961
 dorsal, intact fibers in severed,2436
 potentials, temp., as affecting, frog,13075
 perineurial cysts,16950
 splanchnic, stim., after adrenalectomy, cat,13000
 effect on:
 blood pressure,5713
 gastric motility,7502
 intestinal villus activity,3760
 intestine, adrenal insufficient cats,12643
 kidney renin content,7738
 pancreatic secretion,16685
 vit. C in after stim.,16530
 splanchnic vs. vagus, irritation, effect on complement titer of serum,4461
 on phagocytosis-promoting power of serum,4476
 stimulation, acetylcholine liberation after,11078
 effect on estrus cycle,14639
 heat production during,464
 high-frequency, localized electrical negativity of muscle around neuromuscular junction due to,14717
 prolonged, effects on reflexes provoked,459
 selective, in sciatic, frog,4010
 strength-duration in normal, polarized and narcotized fiber,4034
 superior alveolar, anatomy,16978
 supply. (See under specific organs, tissues, regions.)
 sympathetic, antigen-antibody reactions affecting, allergy and,4500
 stim., effect on intrapulmonary pressure and venous outflow of perfused lung,11047
 to uterus,11373
 synapses, development in *Lepidosiron*,2437
 function, problems,16695
 sympathetic, inhibition,12643
 transmission,16694
 to teeth in rat,13808
 trigeminal, neuralgia, anat. and path.,16941
 origin, course and termination of secondary pathways, *Macaca*,15018
 section, effect on water intake, dog,9454
 surgical treatment of facial pain and,7668
 trophic innervation of skin, study,11194
 vagus, ablation, effect on intestinal acetylcholine,14657
 spinal respiration after,16575
 acute and chronic injury, diagnosis,15384
 coronary vasodilator fibers, cholinergic,11139
 inhibition, effect on heart, turtle,14759
 inhibition of inspiration by,12643
 pressor response, and secretory granules in pituitary pituitary,11077
 reflex, of heart, asphyxia and,7704
 respiratory control by,3780
 role in cardio-accelerator action of factors, sympathetomized dog,11075, 11076
 section, effect on:
 drug effect on electrocardiogram,11207
 external pancreatic secretion,12643
 heart in thiobarbiturate anesthesia,525
 lactate effect on blood pressure,11192
 metabolism,5533
 lung edema and,7864, 12922

Nerve (*continued*)
 vagus (*continued*)
 stimulation, diuresis after,13009
 effect on:
 amphibian lymphatic heart,16735
 aortic pulse wave velocity, 4060
 bronchi,2250
 carotid blood pressure,5725
 colon motility,5596
 electrocardiogram,11193
 inspiration,16576
 intestinal villus activity,3760
 liver sugar and K output, turtle,3861
 posterior pituitary, dog,3800
 respiration,371, 16585
 ventricle, acetylcholine and,7727
 visco-elastic properties of lung,7529
 pressor response after,11082
 by sine-wave alternating currents of low frequency,5697
 vasoconstrictor, threshold values, 2231
 vasodilator, in parietal cortex of cat,4063
 threshold values,2232, 2233
 vasomotor. (See *Vasomotor system*.)
 to visceral and parietal peritoneum, vertebrates,4333
 Nerve cell(s). (See also *Nerve*.)
 associated with 8th nerve in vertebrates,16959
 excitability, chemical agents as affecting,12643
 giant chromaffin, as progenitor of nervous and adrenal system in vertebrates,5970
 of glandular ganglion secretion in *Nereis*,9395
 in gliomas, development,604
 Golgi apparatus, changes with age, mouse,7110, 7945
 histogenesis of monopolar neuroblast, rat,16966
 metabolism, anesthetics and analgesics as affecting,4138
 neuronophagia in brain due to inanition and age, mouse,11388
 Nissl substance and yellow pigment, method of staining,9709
 relation of size of nucleus to physiological state,11397
 size in striate area in primates,11402
 theory of neurone,7951
 in vitro studies,2470, 2471
 Nerve cord, drugs affecting, cockroach,16703
 function in ventral chain, *Lumbicus*,446
 Nerve ganglia, aberrant, cells as source of intact fibers in severed dorsal roots,2436
 acetylcholine in, crayfish,11084
 after-potentials, origin and nature,13081
 autonomic, disease and age as affecting,4297
 transmission in, fifth stage,14725
 excitability, after antidromic activation,12643
 states of cells after preganglionic activation,13080
 ganglioneuroma of cervix uteri, case,578
 Gasserian, origin in reptiles (*Sternotherus*),733
 mucous, in chorion of small intestine,16561
 occurrence of accessory ciliary in human eye,15050
 pelvium, anatomy,11399
 spinal, differentiation in tissue culture,15084
 staining method for Nissl substance and yellow pigment,9709
 sympathetic, acetylcholine synthesis in,16642
 as influenced by drugs,7782
 by epinephrin and anemia,7555
 origin in chick,8036
 parasympathomimetic drugs as affecting,4139
 relation to splanchnic vasomotor tonus, dog,14721
 stellate, coronary dilator and constrictor fibers, adrenergic,11139
 structure in mammals,11394
 superior cervical, ablation, effect on corneal sensitivity,2210
 on ophthalmic drug action,5771
 sensitization of submaxillary gland after,7523

SUBJECT INDEX

Nervous system-Neurolymphomatosis

- denervation, effect on acetylcholine sensitivity,4028
microelectrode records,12643
strychnine depressant action on,11081
stim., effect on blood sugar, 10907
in wall of human small intestine, structure,15015
- Nervous system. (See also *Brain; Meninges; Nerve; Nerve cells; Nerve ganglion; Nervous tissue; Spinal cord.*)
- anatomy, book,13288, 15016
autonomic. (See also *Nervous system, parasympathetic and sympathetic; Nerve, splanchnic, vagus, etc.*)
activity during hypoglycemia and anoxemia,9486
Ca in, at high altitude,9157
correlative functions,2224
disease and,7665
effect on:
blood vit. C content,3642
hemolysin formation,2545
liver content of cystine and cysteine,4159
metabolism,12773
excitability, adrenalin as affecting,14715
function, creatine output and, 13021
as influenced by:
adrenalin,7654
anthrax infection and vaccination,4679
autonomic drugs, rabbit,14812
drugs,5759, 9393
guanidine,7785, 7786
metrazol,13153
nicotine,13171
physostigmine,13178
xanthine derivatives,5754
morphology,7943
responses in monkey and cat,12643
review,7244, 14737
role in epinephrine action on heart,7735
in respiratory metabolism, dog,5533
stimulation, effect on secretion by colon,363
centers. (See also *Brain, centers.*)
intracysternal application of drugs,5775
- central, acetylcholine in, factors affecting,13001, 14660
acute inflammations, review,7866
anatomy in *Heterodontus*,4332
apraxia vs. agraphia, semiology, 7918
changes in demyelinating periangiosis,16948
degeneration in vit. A deficiency, rat,3715
diseases, in animals, diagnosis, 15384
as cause of obesity,4275
vit. C in spinal fluid in,14508
excitation and recovery equations, similarity to organic growth equations,16693
facilitation and extinction in, factors for,14716
as influenced by:
amines,552
aminocarbazoles,7738
anticholinesterase,16644
atropine,5769
benzedrine,552
Ca and Mg,7749
coramine,2289
curare,12643
diaminocholestan,7805
dibenzanthracene,11294
diphtheria,16898
disseminated encephalomyelitis,16899
drugs, insects,9582
ethylxanthines,9564
hyoscyamine and scopolamine isomers,16773
morphine derivatives,13152
pervitin,7767
prolonged hypoglycemia,2028
rickettsiosis,5866
scorpion venom,11215
shock waves,2219
thyroxine,10971
inhibition, latent, spinal frog, 5701
iodide, SCN, Br and Cl distr. in, 7891
lesions in yellow fever,9610
lipomatosis in, infant,569
melanin pigment in vertebrate, 7944
motor activity, integration mechanisms,12643
motor impulse localization in,4008
multiple degenerative softening, vs. multiple sclerosis,16908
- Nervous system (continued)
central (continued)
pathology, in poliomyelitis,13246
in senile dementias,16939
perineurial cysts of spinal nerve roots,16950
physiology, review,14710
regeneration, extracts and, rabbits,7903
relation to insulin sensitivity,12643
sensory, lesions at various levels, monkey,12643
tracts, cortical projection of medial geniculate body, cats,7960
extrapyramidal, morph.,2435
fasciculus longitudinalis medialis, histogenesis, rat,16966
fiber connections of center median nucleus,16970
intramedullary course of cervical dorsal root fibers, rabbit,7961
mesencephalo-olivaris medialis and tectocerebellaris, origin and relations, dog,7952
from motor area of cortex to cerebellar cortex, anatomy, 7957
of nuclei in pretectal region of turtle brain,15012
optic. (See also *Nerve, optic; and Visual system.*)
in one-eyed subject,7955
pyramidal, anatomy in *Echidna*,16973
of red nucleus and basal ganglia, mammals,11401
spino-cerebellar, degeneration in leopard,12643
tegmenti medialis, connections with inferior olive, cat,7953
termination of brachium conjunctivum in thalamus,678
from thalamus to cerebral cortex,686
of trigeminal nerve in primates,15018
of vagus-post-pituitary reflex, 7658
changes, in peptic ulcer,16951
cortical and subcortical localization patterns, interrelationship, 16977
development, in *Lepidosiron*,2437
reciprocal interweaving in, infants,7616
diseases. (See also *Neuritis.*)
Landry's ascending paralysis, histopath.,2410
ovine, *Listerella* causing,11724
neuralgia, major trigeminal, anat., path.,16941
vit. B, treatment,14562
disorder, in newborn lambs,8328
evolution, killing action of nicotine isomers and,18002
extracts, of *Maia squinata*, effect on organs of *Maia*,5778
function, relation to holism,10672
functional tendencies in development of pathol. processes,2413
hist. in coelenterates,17066
immunity and,13084
lesions, in beriberi and pellagra, 14952
nutritional deficiency and,2004
organic vs. functional,7905
due to tetanic poison,2229
liver diseases, nutrition and,2091
.....2093, 2097
miliary necrotic process of unknown origin, monkey,654
morbid anatomy in domestic animals, book,8318
parasympathetic, vagotonia, adrenal gland ingestion as affecting,4268
pathology, classification,7912
peripheral, anatomy in *Heterodontus*,4332
as pathway of tetanus toxin to C.N.S.,11530
riboflavin deficiency as affecting, chick,824
reflex theory in development,11443
role in anterior regeneration of earthworm,5968
of hormones, invertebrates,8857
in regeneration of appendages, insects,435
sound picture, guide for,15010
strychnine as affecting, Ca and,4016
sulfamide compounds retained by, 13548
sympathetic. (See also *Chromaffin tissue.*)
ablation, to ear, effect on tumor production,18219
effect on:
blood plasma vol.,9148
blood sugar, dog,10890
- Nervous system (continued)
sympathetic (continued)
ablation (continued)
effect on (continued)
CO₂ effect on peripheral circulation,16747
homeostasis, dog,7411
renal hypertension,508
vasa vasorum, rat,2269
pre- and postganglionic, effects, cat,12643
role of vagus in cardio-accelerator actions of factors after,11075, 11076
in acrocyanosis,11263
activity, role of adrenals in,394
in anaphylactic shock,4472
basal ganglia in sympathico-endocrine insufficiency,2404
cervical. (See *Nerve, cervical sympathetic.*)
chemical irritation of vein and, 13106
efferent pathways from hypothalamus, decussations,7655
as influenced by:
adrenal cortex,9371
amines after decerebrate shock,11212
ephedrine,13178
extracts of chalcidupa,14943
lactates,11192
procaine and cocaine,14831
lumbar, ablation, effect on arteries,7712
tail gangrene from ergotamine poisoning after, rat, 7845
changes, relation to expt'l femoral arteritis,14912
multiple tumors,2375
myelencephalic center, fish,14659
nervous conduction, blockage and subordination,14712
neuroses and,7914
reflex inhibitory center in medulla,7671
role in circulation of hand,4065
in reflex dilatation of pupil, 14738
section, exercise after, cat,9488
progressive, effect on hypertension,12643
stimulation, effect on:
basal metabolism, rabbit,3666
lymphatic hearts, amphibia,16735
rabbit ear position,16739
tissue response to,11080
tone, and psychic influences as affecting,12643
trophic influences,457
theories of neurogenesis, review,2437
vit.-A deficiency as affecting, pigs, 6242
work, review,7657
- Nervous tissue. (See also *Brain; Nerve; Nerve cells; Nerve ganglion; Nervous system; Spinal cord.*)
cholinesterase in,16640
cultures, migratory fatty cells in, 2468
gliomas, structural development,604
incinerated, distr. of inorganic ash,4367
potassium in after adrenalectomy, 3821
staining, Marchi method,11403
tumors, sacrum, clin-path.,16828
wandering cells, form changes in various media,750
- NESEONOS (Col.) (p.1876³), genotype brunneus,8781
† NESIDES (Pisces) (p.1879⁴) schmidtii,6971
Nesoluma (p.1866⁴), monograph and n. sp.,1131
Nest(s). (See under *Ants; Birds; Wasps; etc.*)
Nettastomela, *Facciolella* n. name for, 6974
Nettastomidae (Pisces), p.1879²
Nettion (p.1881²), food habits,9064
Neufeld reaction, enzymic nature,13495
Neural crest, behavior in forebrain region, *Ambystoma*,17035
inductor, localization in frog egg,758
of 10 somite human embryo,17036
Neurilemma. (See under *Nerve cells.*)
Neuritis, bilateral peritoneal, of gonorrheal origin,6197
blood vit. B₁₂ in,4261
peripheral, allergy to bee stings, 15159
retrobulbar, in pellagra, diet and,13270
Nigeria,13270
Neuroglia, differentiation in cockroach,4400
Neurology. (See *Nervous system.*)
Neurolymphomatosis gallinarum, ante-mortem diagnosis method,11722
egg transmission as shown by iritis,11744
etiology, path. and control,6235

- Neurolymphomatosis (continued)
 helminths and,6749
 histopath. and nature,8325
 therapeutic and immunity trials,6236
 transmission and,11742
 types, symptoms and path.,11741
 vit. E as affecting,16545
 Neuromotor apparatus. (See *Fibrillar System*.)
 Neurones(s). (See *Nerve, fibers; Nerve cells*.)
 Neuroptera, p.1875¹
 Neuroses. (See also *Psychoses*.)
 anxiety states, blood lipids, vs. hyperthyroidism,9633
 hypoglycemia and,11805
 cardiac, with organic heart disease,16745
 and respiratory,7909
 diagnosis, Lange gold sol reaction, 3616
 etiology, therapy,7914
 exptl., in dogs of known genetic constitution,12643
Neurospora (p.1861⁴), hybrid perithecia in,2810
 inbreeding for increased fertility,11818
 perithecia formations as affected by hormones,2309
crassa, chromosome number,5289
 inheritance of growth rate, heterosis, cytoplasmic inheritance, 5313
 non-random crossing over in second chromosome,1751
sitophila, conidial fertilization in, 6336
 fertilization by conidia in,6336
Neuroterus (p.1878⁵) *baccarum*, oogenesis,14350
NEUTORNEUMA (Col.) (p.1876⁶) *porteri*,12348
 Neutral red, effect on galvanic-narcosis,535
 on vacuoles, *Polytrichum*,7094
 kidney elimination, frog,14671
 staining of unfertilized eggs by,176
 synergism with paralytic drugs,535
 Neutrons, effect on chromosomes in mitosis,12698
 on organisms, x-rays and,7319
 fast, effect on mutation rate, *Antirrhinum*, *Myosotis*,1738
 fruitfly,204
 production,189
 and dose,204, 205
 Neutropenia, aminopyrine causing, 16759
 drugs causing,2313
 effect on wound healing,16900
 Neutrophile(s). (See under *Leucocyte*.)
 Neutrophilia, bleedings inducing,825
 Newborn. (See also *Fetus; Infants*.)
 Parent-offspring relationship; *Placentaria*; *Pregnancy*; etc.)
 basophilic aggregations, rats,10916
 blood O₂ in sheep,3615
 blood picture in, rats,3621, 10891
 blood sugar and ketones in, sheep,5511
 Hb in, rabbits,9146
 mammals, immunity, mechanism,6098
 O₂ dissociation curve, calf,7373
Newportia (p.1873⁴), n. ssp.,6881
 Newstead, Robert, portrait,7075
 Newt(s). (See *Salamanders*.)
Nezara (p.1875⁴) *viridula*, life history and descrip., parasitized by *Micropharus*, Australia and Egypt,5068
 Niboeng. (See *Oncosperma filamentosum*.)
 Nickle, absorption by wheat, effect on bunt,5007
 antianemic effect,14512
 effect on growth, of tumor cells,13225
 pectin containing, bactericidal action,2671
 Nicolas-Favre disease. (See *Lymphogranulomatosis, inguinale*.)
Nicoletia n. sp.,8801
Nicotiana (p.1867⁷). (See also *Tobacco*.)
 directed heritable variations conditioned by euploidy,5320
 excised callus, tissue culture,6593
 induction of polyploidy by heteroauxin treatment,3458
 somatic segregation of flower color,1755
 species and species hybrids, induction of polyploidy in, by colchicine,18188
alata-*N. langsdorffii* F₂ s, recombinations in,14355
 multivalents, note,4782
rustica, new hybrid of,13797
tabacum, curly top (virus), acquired tolerance,1482
 cytokinesis, omission of, phloem fiber,1168
 gene interaction in, of polymeric genes,5818
 grafted onto *Hyoscyamus niger*, effect on blooming time,1752
 phloem, ontogeny and structure, 1167
 Nicotinamide. (See *Nicotinic acid, amide*.)
 Nicotine. (See also *Tobacco*.)
 in *Asclepias* root,12041
 bentonite, for codling moth,10395
17856
 with Cu as fungicide and insecticide,14149
 chronic toxic effects, rats,5736
 detn., in forensic material,211
 in urine,13011
 effect on:
 action potentials of retina,440
 blood pressure,13000, 13138
 blood sugar,13170, 14838
 cerebral potentials, rabbit,7656
 cholinesterase,14661
 color of flatfish,14662
 diphtheria toxin action on heart,16809
 endocrine system, guinea pig,14642
 fish,9565
 grasshopper heart,4115
 lactic acid in brain,5788
 male genitalia,16622, 16623
 nerve cord of cockroach,16703
 peripheral nervous system,13171
 physostigmine and acetylcholine action on ganglia,7782
 as insecticide, agar-agar as activator,14148
 for aphids,12184, 17879
 for codling moth,12175
 for grape moth,12174
 oviductal action,10470
 for pea aphid,10404, 17886
 quebracho-fixation, for corn borer,17883
 for root aphid on poinsettia,5042
 for strawberry leafroller,10396
 for thrips on flax,14119
 isolation from urine,3946
 isomers, killing action, relation to nervous system evolution, 13002
 poisoning, spinal reflexes in,12643
 in tobacco, detn.,12046
 synthesis, factors affecting,4823
 in tobacco leaves, amino acids and nicotinic acid as affecting,17721
 distr.,12017
 Nicotinic acid. (See also *Vitamin B*.)
 amide, detn., in blood,16365
 in organs,1926
 effect on black tongue, dogs,16919
 on root growth, tobacco,10316
 in normal and avitaminotic rats,13266
 therapy in pellagra, Egypt,5844
 and amide, rôle in nutrition,12839
 in canine blacktongue,2063, 3726
 color reaction for urine,3953
 deficiency, in cattle,11735
 detn.,7289
 in biological material,220
 in blood,16364
 in urine,16926
 effect on:
 blood V-factor,7853
 cozymase,5841
 dermatitis due to riboflavin deficiency,4263
 endemic glossitis,16922
 exptl. gastropyloric pellagra,4260
 gastrointestinal motility,11029
 growth pea embryos,4926
 idiopathic steatorrhea,3731
 nicotine formation, tobacco leaves,17721
 root growth, tomato,10316
 growth factor for bacteria, 6818, 17470
 for *Brucella*,13705
 for isolated root tips,17707
 for pea roots,17706
 in pellagra therapy,322, 4262, 11345
13273, 14942, 14950, 16920
 in production of nucleotide and codehydrogenase, in pellagrins, 4265
 requirement, for dog and rat,7475
 for *Proteus vulgaris*,4712
 for sheep,9232
 salts, effect on antibody production,2552
 as test for *B. proteus*,16518
 toxicity and pharm.,5566
 Nictitating membrane. (See under *Eye*.)
Nidorella (p.1879⁴) *armata* (*Benthoptera armata*),14225
 Niemann-Pick's disease, isolation of lipid inhibiting blood coagulation in,1958
NISSLIACEAE (Fungi), p.1861⁴, 15453
Nigella (p.1865³) *sativa*, color changes in stained material produced by nucleolus,10714
 Nile blue sulphate, effect on *Clonorchis sinensis* in vitro,4552
Nina (p.1868⁴) *gracilis*, from centipede,12288
 navillae, in centipede intestine,6761
scolopendrae, possible identity with *N. gracilis*,12288
Nipah fruticans, frond transpiration in relation to sap yield,12569
NIPHARGELLUS (Crust.) (p.1874⁴), n. sp.,6849
Niphargus (p.1874⁴), spp. transf. to *Niphargellus*,6849
Nippostrongylus, immunity to, nature and mechanism,15176
 muris, cellular vs. humoral reactions of normal vs. immune rats to,11572
Nirmus (p.1875⁴), spp. transf. to n. genus,3797
Nirvana (p.1875⁴), new spp. from Australia,18016
 Nissl granules. (See under *Nerve cells*.)
Nitella (p.1860²), action currents in, relation to salts,1392
 bioelectric potentials, Ca as affecting,3077
 electric conduction, during activity,1391
 mobility of ions in surface of protoplasm, factors influencing,3070
 pacemakers in, relation to arrhythmia and block,1393
 potential differences in, delayed K effect,1365
 protoplasm changes in apparent ionic mobilities,10311
 hyalina † var. *sciejaurensis* (Pl), 10102
 Niton. (See *Radon*.)
 Nitrate, prep. and use,1046
 Nitrate(s). (See also *Nitrogen; Nitritification*; and under specific nitrates, e.g., *Ammonium*, *nitrate*, *Sodium*, *nitrate*.)
 absorption by diatoms, P as affecting,13975
 accumulation in cell sap, *Valonia* and *Halicystis*,3071
 assimilation and metabolism, Fe and Mn as affecting,12098
 bacterial reduction, enzymes involved,15425
 effect on:
 absorption of herbicides,10386
 ash and N content, sugarbeet, 15532
 chloride balance,12643
 oxygen production by plants, 14008
 respiration and protein synthesis,10328
 oat roots,10328
 ethyl, toxicity, factors affecting, 16754
 as fertilizers. (See under *Fertilizers*.)
 in organic manures, quantitative detn.,15407
 organic, pharm.,13178
 phosphate ratio in sea water,1846
 reduction by *Bacterium coli*,8367
 by *Clostridium welchii*,8367
 in plants,3085
 rôle in cytochrome oxidation by colon bacillus,12706
 in soil. (See under *Soil*.)
 storage in ruderals,116
 test for blood-C.N.S. barrier permeability in poliomyelitis,9081
 Nitrazene paper, in pH detn. of urine,13534
 Nitric oxide, produced by gas burners,11370
 Nitrification. (See also *Ammonification; Denitrification*; under genera of nitrifying bacteria.)
 in composts, temp. as affecting,6294
 fertilization of citrus orchard soils as affecting,17442
 in organic manures,15407
 Nitrites, alkyl, depressor action,2314
 amyl-. (See *Amyl nitrite*.)
 bacterial formation from ammonia, mechanism,8348
 effect on:
 blood Hb,7365
 muscle Hb,10889
 retinal vessels,14773
 as intermediate in bacterial nitrate reduction,8367
 octyl, pharm.,2314, 2315
 sodium, action in cyanide poisoning,9545, 13178
 in tank pickle, changes and factors affecting,10046
 Nitrobenzene, detn. in blood,7314
 toxicity, factors affecting,14824
 p-Nitrobenzoic acid, derivatives, chemotherapeutic value,13545

SUBJECT INDEX

Nitrocellulose-Notiommimetes

Nitrocellulose. (See Collodion.)

Nitrogen. (See also Amides; Amino acids; Ammonia; Nitrates; Nitric acid; Protein; etc., and under specific compounds, e.g., Glycine, Urea.)
absorption by algae, light as affecting, 15698
by barley, P and N in nutrient medium as affecting, 1350
by oats, P as affecting, 12059
amino acids as source, in yeast metabolism, 8588
amino, analyses by nitrous acid method, function of I_2 in, 1917
bacterial production, electrical conductivity and, 2745
detn., 16359
disappearance from liver extracts, 5825
formol titration, 16358
in apple shoots, season and rootstocks as affecting, 1275
assimilation, by potatoes and oats, dicyandiamide as affecting, 4844
balance, of adolescent Chinese boys on low cost diet, 2010
amides in pig ration and, 8071
amides and urea in rations and, sheep, 5999
as influenced by:
amino acids, 10974, 14531
milk intake, children, 11265
thyrotropin, frog, 9331
vit. D excess, 309
on low protein diet, 5520
on medium protein diet, women, 5522
negative, fat deposition during, 5992
in pregnancy, 9177
in renal insufficiency, 16646
in vit. B deficiency, dogs and pigeons, 5558
in barley vars., relation to saccharifying activity, 6453
in blood. (See under Blood.)
compounds, in *Cysticercus*, 17910
excretion from legume root nodules, 15409
heterocyclic, carcinogenic activity, 18207
marine bacterial utilization, 18707
nitro groups, organic antidotes to, 14824
nitro and amino groups, chemotherapeutic value, 13545
in tobacco leaves, 4945
ureides, in *Soja hispida*, 8587
constitution, of tobacco mosaic virus, 3130
in cotton plant, fertilizer as affecting, 13814
in decaying forest litter, 8535
deficiency, effect on tomato hypocotyl, 6564
detn., in body fluids, rôle of formalin in, 5484
in horse feces, 11486
Kjeldahl, micro, 7308
digestion apparatus, fumeless type, 1414
distr. in alfalfa hay, during growth, 1183
in pineapples, when given nitrates and ammonium salts, 15767
effect on:
catalase, from apple seedlings, 14030
crop plants, nitrates vs. ammonium salts, 8455
yields and protein content, 15569
feed value, forage plants, 2932
flower structure, tomato, 6514
growth, *Cunninghamella*, 17673
hardness, bluegrass, 14023
loss of acid, by oranges, 12094
protein in grass, 17579
respiration of leaves, *Aralia*, 8581
shape of sweet potatoes, 13791
thermogenesis, fungi, 12099
tomatoes, on muck soils, 1248
toxicity of Sudan grass, 11177
water core, in apples, 13882
water utilization by forage crops, 1203
wax and fats in sugarcane, ammonium vs. nitrate salts, 17577
wheat, grain-straw ratio, 4818
excretion. (See also Urine, nitrogen.)
by yeast, 1397
extracellular, in *Azotobacter* cultures, 17426
extractives in fish, 9174
fertilizers. (See under Fertilizers.)
fixation. (See also Legume nodule bacteria; Legumes; and specific organisms, e.g., *Azotobacter*, *Rhizobium*.)

Nitrogen (continued)

fixation (continued)
by *Azotobacter*, alone and in symbiosis, 17434
as influenced by:
agar and trace elements, 17422
auxin, 4702
Fe and Mo, 10070
by legume nodule bacteria, mechanism, 15409
by legumes, soil factors in, 17419
mechanism of biological, 13689
in rice fields, blue-green algae rôle, 11785
in soil, cropping as affecting, 8345
symbiotic, carbohydrate-N relations, 11788
inhibition by H_2 , 8353
mechanism, review, 17440
in grapefruit trees, metabolism related to yield, 17634
in grasses, N fertilizers as affecting, 15557
hereditary response to different forms, maize, 12527
to different levels, tomato, 12527
in Indian chillies and coriander seeds, 5521
inhalation therapy for schizophrenia, 12643
isotopes, detn., 7421
normal abundance in amino acids, 7423
in study of activity of α -amino group of histidine, 7426
of hippuric acid formation, 7422
of tyrosine metabolism, 7425
synthesis of amino acids containing, 7424
in legume nodules, absorption by non-legumes, 8344
loss from soils, through decomposition of nitrates, 17612
in marine zooplankton, 10792
metabolism, endogenous, of sheep, 16184
in plants, 3085
of apples in storage, 12095
in apple fruits, 10330
effect on bases in corn, 13979
on organic acids in corn, 12116
on resistance of tobacco to *Thielavia*, 4992
in fungi, 17675
as influenced by:
boron, 12056
indoleacetic acid, bean, 4920
iron and Mn, 10304
light, 12098
of *Phytomonas stewartii* on maize, 3169
relation to assimilation, 15733
to drought resistance, 14024
in sugar beet yellows, 6648
of yeast, 1397
nutrition, plant, effect on:
foliar diagnosis, corn, 17676
potatoes, 4914
nicotine synthesis in tobacco, 4823
photoperiodism, *Xanthium*, 10317
of peach trees, 17640, 17641
of tobacco, 4913
organic, detn., 1934
in peach twigs, relation to hardness, 14027
in plants, Ca absorption as affecting, 8566
detn. of fractions, 3099
N fertilizer as affecting, 10182
in plant extracts, detn., 15785, 15786
in protein fractions of barley vars., 1174
in proteins, denaturation as affecting, 290
protein and non-protein in foods, effect on digestibility coefficient, 5523
in rain water, factors affecting, 2938
relation to oxidation-reduction, 1354
removed from lysimeters, vegetative cover as affecting, 13818
requirement by tomatoes, var. differences, 15614
for rice, sources compared, 1351
in soil. (See under Soil.)
stability in organic compounds, 7419
in sugarbeets, nitrates as affecting, 15532
in urine. (See under Urine.)
utilization by *Aspergillus*, sources compared, 12100
in *Vicia villosa*, fertilizers as affecting, 8472

Nitrogen (continued)

in wheat, air temp. and soil moisture as affecting, 3466
Nitrogen monoxide, anesthesia, recovery sequence after, 8981
Nitroglycerin. (See *Glycerol trinitrate*.)
Nitrophenol, toxicity, factors affecting, 14824, 16775
Nitrotyrosine, serological reactions, 9876
Nitschia (p.1861), n. sp., 15458
eumphala, syn., 13786
Nitzschia closterium, absorption of N and P by, 13975
Nocomis biguttatus, melanophore response to light-intensity differences, 430
Noctuidae (Lepidoptera), p.18774
Node. (See Stem.)
Nodule bacteria. (See Legume nodule bacteria.)
Nodules, juxta-articular, associated with syphilis and yaws, 981
milkers', virus, inoculations and vaccination relationship, 4601
plant. (See Galls; Legume, nodules; Legume nodule bacteria; Root nodules.)
Noguchia granulosis. (See *Trachoma*.)
Nolanea (p.1862), *vinacea*, descriptive notes, 2801
Nolina (p.1865), in dung of ground sloth, 7048
Noma, *Klebsiella pneumoniae* from, 6178
Nomeidae (Pisces), p.18794
Nomenclator, Animalium, 5
Nomenclature, of animals, categories lower than species, 14816
list of genera and subgenera from, 1758 to 1935, 16127
biological, authority citations in, 1671
botanical, additions and amendments to International Rules, 8870
use of statistics in detn. of spp., sub-spp., and races, 3412
Nomogram(s), for analysis of Mendelian ratios, 10749
for thermal processing of tinned foods, 6267
Nomographs, recent advances, 7168
Nomurea (p.1863), on *Grossocoma*, 3224
Non-disjunction, inversion in X-chromosome as affecting, *Drosophila*, 7148
of single chromosome, in *Brahma*
Barred Rock mosaic, 1778
of X's in *Drosophila*, 1726
Nonion (p.1868) *terquemianum*, N. N. for *Nonionina umbilicula*, 14199
Nonionella (p.1868) *reussana* (K), Germany, 14199
Nonionidae (Protozoa), p.18682
Nonionina umbilicula, new name for, 14199
Non-specific therapy. (See under Therapy.)
Normanichthys (p.1880) *crockeri*, osteology as affecting taxonomy, 3385
Nose. (See also Olfactory; Respiratory tract.)
bacterial filtering efficiency, 15329
bent, in relation to nutrition and heredity, rat, 1771
bridge, transverse development, 11485
epidemic influenza infection, histol. in ferrets, 620, 621, 627
hemolytic streptococci, in double poured plate for exam., 8271
mucosa, pantocaine as affecting, man, 13151
progesterone as affecting, man, 16637
vascularization, 5890
post natal development, 4273
reflexes, cardio-inhibitory and vaso-depressor, 12643
heat regulating, 16817
rhinosporidiosis in, cattle, 3251
secretions in allergy, cytology, 17187
septum, vascular reactions, 12643
surgery, complement titer after, 2587
Nosema bombycis. (See also *Silkworm*, *pebrine*.)
transmission by spermatozoa, 1561
Nosematidae (Protozoa), p.18694
Nostoc (p.1860), n. spp., 8385, 15437
Nostocaceae (Algae), p.18601
Notechis scutatus, venom, action, treatment, 5161
effect on blood clotting, 875
effect on dehydrogenase, 10850
Notemigonus biology, 10814
Nothofagus forest, 3502
menziesii, silvicultural management, 10252
NOTHOPHEREANEUM (Pterid.) (p.1863), subg. of *Dryopteris*, 2819
Notiomimetes (p.1876), syn., 3333

- Notiosorex* (p.1882¹) *crawfordi*, range extension of,7038
 Notochord, chordoma, vs. vertebral column,13204
 development in reptiles,11444
Notocotylidae (Platyhelminthes), p.1869⁴
Notocotylus (p.1869⁴) *urbanensis*, in ducks, Michigan,1591
Notodelphyoida (Crustacea), p.1873²
Notodontidae (Lepidoptera), p.1877²
Notodreus (p.1874⁴) *cati*, chaetotaxy of,6555
Notommata (p.1871²), n. sp.,6807
theodora, transf. to *Proales*,6806
Notommatae (Rotatoria), p.1871²
Notonectidae (Hemiptera), p.1875²
NOTOPTEROCHEIS (Platyh.) (p.1870⁴)
 collocaliae,6785
Notopogon (p.1879⁴), *endeavori*,3383
NOTOPORIDAE (Platyh.) (p.1870⁴), n. fam.,6803
NOTOPORUS (Platyh.) (p.1870⁴),6803
Notops brachionus, mictic and amictic individuals,14220
Notopygos (p.1871²), n. spp. from Hawaii,17964
Notropis (p.1879²) *cornutus chrysocephalus*, annulus formation in scales, 18044
 whippitii, oxygen threshold,5411
Notropocharax (p.1879²), synonymy,5156
 Novaldin, neutropenia produced by,2313
 Novocaine. (See *Procaine*.)
Novakowskiiella, culture,17488
Nucellus. (See *Ovule*.)
 Nucleic acid(s). (See also *Nucleoproteins*.)
 effect on blood picture and reticulo-endothelial system,10900
 hydrolysis by nucleotidase, kinetics,12103
 from *Penicillium glaucum*, comp. and yield,12113
 in tissues, detn.,7407
 of tobacco mosaic virus, constitution and properties,17784
 of virus proteins, u.v. absorption spectra,17783
 x-ray studies,9106
 Nucleinate, sodium, effect on Leucocyte formation,12113
 Nucleolus. (See also *Meiosis*; *Mitosis*; *Nucleus*.)
 color changes in stained material induced by,10714
 differential stain for chromosomes and,3447
 technic,5284
 lecithin as constituent,1713
 in *Psilivictoria lyelli*,5295
 relation to chromosomes, *Trillium*, 1707
 to Z chromosome, *Bombus*,1724
 in rusts,17494
 Nucleoplasmic ratio, in plant cells, significance and changes during growth,17703
 Nucleoproteins, in cells, differential staining and,7838
 of streptococci, chem. and serological properties,12643, 17222
 hemolytic,15167
 Nucleotides. (See also specific nucleotides, e.g., *Adenylic acid*.)
 alloxazine-adenine-di-, constitution,11146
 pento-, leucopoietic action,11218
 Nucleus(i) (brain). (See under *Brain*.)
 Nucleus (cell). (See also *Chromosomes*; *Meiosis*; *Mitosis*; *Nucleoplasmic ratio*; *Nucleolus*; etc.)
 abnormalities in merogonic amphibian hybrids,9768
 of amphibian oocyte, physiology and morph.,14349
 bacterial,2773
 behavior in *Acetabularia*, (alga), 10103
 chromosomes and, *Begoniaceae*,41
 control of cell activity,8935
 differential staining, factors affecting,7888
 division, in *Dientamoeba*,5105
 during cleavage, zebra fish,13327
 extrusion, in insect blood cells,12513
 hypo-, and hyper-tonic solns. as affecting,2473
 inclusions, in virus diseases. (See *Inclusion bodies*.)
 inorganic content, as index of tumor radiosensitivity,4185
 lipids in,16496
 macro-, reorganization, *Blepharisma*,8724
 membrane permeability, x-rays as affecting,16326
 of nerve cell in relation to physiological state,11397
 plant, centrifugation as affecting, 8907
 Nucleus (continued)
 reaction to dyes,7997
 reorganization in *Paracelandia* (Ciliate) without cell division, 3263
 of rusts, relationship in binucleate cells,17494
 size, in plumar meristems of inbred and hybrid maize,3457
 variations in *Sequoia* gametophyte,10163
 spindle development, relation to viscosity, tumor cells,4198
 structure in *Babesia bigemina*,3268
 of suprarenal cortical cells, differential strain for,15042
 vol. after multiple successive mitosis, mouse ova,15062
NUCLASPIIS (Hom.) (p.1875⁴),10605
Nudibranchiata (p.1872²), eggs, development, centrifuging as affecting,8054
Numenius (p.1881²) *madagascariensis*, dist. habits,16073
Numida, *Capillaria* lesions in,12263
 new cestode parasite,15987
 meleagris. (See also *Guinea-fowl*.)
 Nuptial, display and flight. (See *Mating behavior*.)
 Nursery(ies). (See also *Propagation*.)
 fertilizers for,15613
 forest. (See under *Forest*.)
 injury due to June beetle, Finland,12201
 seeder for, cereals,11932
 Nurses, microbiology and pathology textbook for,9972
 pulmonary tuberculosis incidence in,17110
 tuberculosis immunization by BCG in,17196
 Nursing, public health, milestones (15-yr.) in,11683
 Nurslings. (See *Infants*; *Parent-offspring relationship*.)
 Nut(s), Brazil, cashew and macadamia,8002
 in ice cream mixes, bacteria in, 10068
 Macadamia, characters and selection,2978
 Nut grass. (See *Cyperus rotundus*.)
 Nuthatch(es). (See *Sitta*.)
 Nutmeg tree. (See *Torreya californica*.)
 Nutria. (See *Myocastor*.)
 Nutrient(s), absorption by tomatoes, during growth,15730
 effect on drought resistance, red pine,15774
 plant, minor elements as,1198
 in soil, release by plants,13790
 solutions. (See under *Nutrition, plant*.)
 in tobacco soils, fertilizer as affecting,17582
 Nutrition (animal). (See also *Diet*; *Feeds*; *Foods*; *Growth*; *Metabolism*; *Carbohydrate*; *Fat*; *Protein*; *Minerals*; *Nitrogen*; *Vitamins*; etc.)
 book,4655, 7403
 calorie requirements, man,2017
 cholesterol in,13263
 coffee and caffeine in,5528
 deficiency, address,14948
 effect on:
 parasite diseases, lambs,6728
 tuberculosis,2378, 2386
 wool growth and quality,13353
 human, cattle fodder and, book, 13689
 mal-, A.O.H. index and, S. African children,9580
 blood vit. B₁ conc. in,4261
 carbohydrate metabolism in,7481
 effect on antibody titers in children,8106
 on phagocytic titers in children,8106
 hypophyseal hypofunction and, 14967
 indices in school children,11271
 ocular symptoms,18274
 pituitary activity in,12999
 study,14518
 motor activity and, mice,12772
 nervous system, liver diseases and,2091, 2093, 2097
 nicotinic acid in, importance,12839
 problems, Dutch East Indies,10950
 protein of different sources required in,11474
 protein-intake level, effect on growth rate, pigs,15102
 protozoan, autotrophic, in *Chilomonas*,3256
 in *Euglena*,10525
 food abundance, relation to conjugation,5099
 to reproduction,5102
 food vacuole movement, sucrose as affecting,3264
 metabolic product controlling reproduction in cultures,5103
 of plant-like flagellates,12281
 pyrimidines as stimulating growth,1582
 relation to nail growth, children, 16820
 requirement of pig,12852
 of rat,7468
 role in growth of infants,559
 in obesity in childhood,16819
 ruminant, review,14440
 of sheep, effect of Si deficiency on wool,11487
 skeletal diseases of horses and,15365
 vit. C sufficiency in, skin test for, 12855
 Nutrition (plant). (See also *Growth*; *Calcium*; *Carbohydrate*; *Carbon*; *Fat*; *Mineral*; *Nitrogen*; *Phosphates*; *Protein*; *Fertilizers*; *Soil*; etc.)
 bacterial, amino-acid interrelationships,15414
 Ca as affecting, maize,10298
 of flowering plants, book,6516
 foliar diagnosis, in potato,4914
 of fungi, effect of dextrose and thiamin on *Phycomyces*,14003
 role of heavy metals,10296
 Mn intake by spruce, factors affecting,10264
 Mitscherlich law related to,6563
 N, of cabbage, relation to response to indoleacetic acid,4917
 in corn,17676
 nutrient solutions. (See also *Culture media*; *Hydroponics*.)
 aerators for, production,17742
 for *Deschampsia*,1353
 for rice,1351
 for tissue culture, carrot,17700
 excised tomato roots,8574
 role of glycine in,17728
 pea roots,17706
 root tips,17707
 vegetables,1228
 of plant-like flagellates,12281
 problems connected with minor elements,1354
 relation to sex,6558
 role of heavy metals and method of study,10297
 of K in,6561
 of trace elements in,13980
 salt,10194
 in tomatoes, assimilation,1352
 of *Ustilago* spp., aneurin as affecting,6572
 Nutritional value. (See *Diet*; *Feeds*; *Foods*; *Nutrition*; and specific feeds and foods.)
 Nuttallia (Prot.) (p.1869²). (See also *Piroplasmosis*.)
 cynicti, from mongoose,1583
 equi, morphology and vectors,6756
 Nuttalliosis, equine,6756
Nybelinia (p.1870²) lamontae, from swordfish,6795
 Nyctaginaceae (Dicotyledones), p.1865²
 Nyctalopia. (See *Blindness, night*.)
Nycteribia (p.1873⁴), spp. hosts,10443
 Nycteribidae (Diptera), p.1878¹
Nycticeius (p.1882²) *humeralis*, in Michigan,7038
 sex ratio,18105
Nycticorax nycticorax hoactli, social behavior,7019
Nyctidromus (p.1881²), food habits,9064
Nyctotherus (p.1868³) **NEOCURTILLAE**,12278
Nyctotherus (p.1868³) *neocurtillae*,12278
Nygmia phaeorrhoea. (See also *Moth*, brown tail (= *Euproctis chrysorrhoea*.)
 Nymphalidae (Lepidoptera), p.1876⁴
 Nymphalinae (Lepidoptera), p.1876⁴
Nymphula (p.1877²) *depunctalis*, life history and parasites of, Philippines, 5039
 Nymphulinae (Lepidoptera), p.1877²
Nyroca (p.1881²) *collaris*, occurrence in northeastern states,9068
 marila, *Polymorphus* n. sp. from,10550
Nyssa (p.1866⁴), of Oligocene, Germany,4724
Nyssopora (p.1862²) *citriobati*, on *Citriobatus*,8407
 Nystagmus. (See also *Vestibular apparatus*.)
 monocular, dissociated, with paresis of horizontal ocular movements,7688
 optic, neural centers in,12643
 postrotatory II, clinical value,13082

SUBJECT INDEX

Oak-Olfactory nerve

- O**
- Oak(s). (See also *Quercus*.)
 cork, cultivation in Algeria,.....12011
 forests in Sweden,.....7203
 growth in coppice-with-standards forest,
 France,.....15672
 hemicellulose from sapwood, chem.,
15765
 insect enemies,.....8648
 Rumania,.....15910
 silvicultural management, Rumania,
17648
 vitality of roots,.....15673
 white, old growth, defects in, tree form,
 and vol. tables,.....1306
 woods, of Denmark, ground flora, 10787
 Oak leaf-roller. (See *Tortrix viridana*.)
 Oats. (See also *Avena*.)
 cold resistance, rust as affecting, 17818
 crown rust (*Puccinia coronata*), epidemi-
 ology in Louisiana,.....15848
 longevity of urediospores,.....3169
 new physiological form in Arkansas,
3143
 dust, antigenic factor, nature,.....15144
 fertilizers for, silicates as,.....15529
 flour, antioxidant properties,.....15400
 paper milk-bottle treatment with,
 to prevent off flavor in milk,
17412
 heat resistance, vars. compared, 17569
Heterodera schachtii on, control,.....1460
 penetration and development of
 larvae in,.....4973
 of high and medium yield, var. tests
 in Wales,.....4831
 improved vars., registered in U.S.A.,
1206
 loose smut (*Ustilago avenae*), environ-
 mental factors in,.....3169
 genetics of resistance,.....15845
 mill feed, in livestock rations,.....11472
 mosaic, new virosis,.....17791
 nematode stem disease,.....17773
 new lines of practical value,.....12533
 organic matter in soil after,.....2975
 osmotic pressure of shoots, water con-
 tent of soil as affecting,.....17690
 proteolytic enzymes in, and effect on
 furs during fermentations, 14461
 roots and root hairs,.....9012
 smut and rust resistant vars. for
 U.S.A.,.....1205
 variety tests, England,.....13798
 USSR,.....13835
 vernalization, vars. compared,.....1208
 yield, depth and slope of soil as af-
 fecting,.....17594
 soil disinfection as affecting,.....1460
Obelia (p.1869²), growth, d-valine as af-
 fecting,.....3208
 l-serine as affecting,.....3207
genticulata, amino acids in,.....2022
 developmental growth, guanine as
 affecting,.....9785
 growth as influenced by adenine,
2045
 by hypoxanthine,.....2046
 by xanthine,.....2047
Obeliscoides (p.1870⁴) *cuniculi*, on Marmota,
 Missouri,.....5253
 Obesity, in adenomas of pancreas and
 pituitary,.....14880
 childhood, nutrition vs. hypo-endo-
 crinism,.....16819
 effect on cardiac output,.....2264
 on diabetes incidence,.....7899
 etiology and therapy,.....14961
 and hypertension, study,.....14782
 hypothalamic-hypophyseal, analysis of
 lipids in, rat,.....12643
 exptl. rat,.....14963
 in Laurence-Moon-Biedl syndrome,
13196
 and menstrual disorders, body build
 and,.....9630
 unclassified types,.....4275
 Obstetrics, Caesarian section, effect on
 potency of foramen ovale, lambs,
476
 and gynecology, book,.....13029
 lecture,.....7593
 hemorrhage in, review,.....16658
 Occupation, incidence of coronary occlu-
 sion and,.....16733
 Occupational diseases. (See *Industrial*
diseases.)
 Ocean. (See also *Littoral*; *Oceanography*;
Plankton; *Water, sea*.)
 Atlantic, meteorology,.....14885
 bacteria, utilization of N compounds
 by,.....13707
 currents, effect on dist. and survival of
 eggs and larvae of haddock, 5410
 on pelagic populations,.....5392
- in relation to plankton variations,
8519
 life, physiology,.....10832
 O₂ minimum layer control,.....3521
 phosphate availability in,.....1845, 1846
1347, 1848, 1849
 phytoplankton, vertical dist.,.....14396
 productivity, rôle of diatoms and cope-
 pods in,.....9040
 salt spray, rôle in coastal ecology,
14381
Oceanodroma (p.1881²) *t. leithys*, in the
 North Pacific,.....5188
 Oceanography. (See also *Ocean*; *Plankton*;
Sea water.)
 book,.....8877
 dependence of pelagic organisms upon
 ocean currents,.....5392
 fluctuations in marine animals and,
3520
 plankton distr. in mixed water masses,
14395
 survey of fauna above mud bottoms in
 Gulf of Maine,.....12620
 Ochnaceae (Dicotyledones), p.1866²
Ochotona (p.1882²), capture,.....18105
 new race from Tibet and W. China,
12441
 trapping of,.....7038
princeps, new nematode parasite, 17952
nigrescens, weasel as enemy of, 5222
 Ochotonidae (Mammalia), p.1882²
Ochridaspongia rotunda, habitat,.....10532
Ochrosidea spp., on maize, as affected by
 crop rotation,.....17865
Ocnaria dispar, biological control,.....8654
 Octalupine, in *Lupinus sericeus* var. *flexu-*
osus,.....17665
 Octin, derivatives, as spasmolytics, 7812
 spasmolytic action,.....4104
Oetomeles (p.1866²) *sumatrana*, distrib. and
 economic value,.....3023
 Octopine, biochemistry,.....4046
 Octopodidae (Mollusca), p.1872⁴
 Octopus, mating and egg brooding, 1610
 retreat-building behavior,.....14229
Octopus (p.1872⁴), salivary glands, his-
 tology,.....703
vulgaris muscle, nitrogenous extractives,
4046
 salivary glands, posterior, histochemi-
 cal study,.....2113
 Oculomotor nerve. (See *Nerve, oculomotor*.)
 OCULOPLANA (Platyh.) (p.1869²), of east
 coast N. America,.....6798
Odontocoleus (p.1883²) *virginianus*, thyroid
 and parathyroid glands, structure,
 histology,.....16984
 comp. of tissue lipids,.....14541
borrealis, in New York,.....5219
 winter movements and food,.....10820
Odoiporus associated with vascular disease
 of abaca,.....4984
 Odonata (p.1875²), ecology, review, 1830
 as interm. host for *Prosthogonimus*,
12258
 malpighian tubules, epithelial cells,
 hist.,.....2477
 nymphs, biology,.....6937
 somatic polyoidy,.....14352
Odontadentia (p.1867²), n. sp.,.....2867
Odontobutis (p.1880²) *obscura*, *Phyllodonta-*
num in,.....1595
Odontocoryna (p.1865²), n. spp.,.....10129
Odontokrepis (p.1873²), n. sp., and n.
 subg.,.....8748
Odontomyia (p.1877²), n. sp.,.....14257
 Odor(s). (See also *Olfactory*; *Smell*.)
 of host, reaction of anophelines to,
15924
Odynerus (p.1878⁴), taxonomy,.....8352
14264, 18022
 habits,.....18027
spirocornis, nest building,.....10612
Oecanthus (p.1875²) *nigricornis argentinus*,
 x-ray-induced chromosome changes,
51
 Oedogoniaceae (Algae), p.1860²
Oedogonium (p.1860²), n. sp.,.....6333
 chytridium on,.....15444
Rhizopodium on,.....18737
Oena capensis, new tapeworm from, 15988
Oenanthe (p.1882²), food habits,.....9064
oenanthe, breeding twice in yr.,.....16071
oenanthe, bird banding,.....14296
Oenistis (p.1877²) *quadra*, larva, distinction
 from nun moth,.....14133
 larvae, on lichens,.....10480
 Oenochrominae (Lepidoptera), p.1877²
Oenothera (p.1866²), n. spp.,.....6421, 6422
 chromosome catenations in,.....40
 genetics of ovule abortion,.....16192
 hybrids, chiasmata, crossing over,
 mutation,.....5330
 lability vs. conversion hypothesis of
 cr gene,.....5325
- Onagra* hybrids, plastid and plasma
 inheritance,.....7103
argentinae, genetic and cytological
 analysis,.....16187
O. berteriana hybrid, chromosomes of,
16170
berteriana, selective fertilization, 10719
brachycephala, analysis of,.....16171
lacinata, *Tylosiderma* on,.....15897
organensis, self-sterility alleles, 12523
 Oenotheraceae (Dicotyledones), p.1866²
Oesophagostomum sp., in calves, control,
1562
radiatum effect on blood picture of calf,
12745
 Oesophagus. (See *Esophagus*.)
 Oestridae (Diptera), p.1878⁴
 Oestrin. (See under *Estrogens*.)
 Oestrus. (See *Estrus*.)
Oestrus ovis, on sheep, Sweden,.....5091
 Oetzel, Carl Christoph, biography, 12479
Oftia (p.1867²) *africana*, embryogeny and
 relationships,.....4806
Oidium (p.1863²), n. forms,.....17487
 on grape, overwintering organs of,
1423
 tomato mildew due to, in Argentina,
15802
albicans, synonym of *Mycotorula a.* 4636
euonymi-japonici, control by water spray,
6688
heveae, in India,.....3111
 Oil(s). (See also *Fats*; *Lipids*; *Mineral*
oils; and specific oils e.g., *Cod*
liver oil, *Corn oil*, *Olive oil*, *Petro-*
leum.)
 acyclic constituents, review,.....14440
 bactericidal power,.....13648
 fish. (See under *Fish*.)
Hydnocarpus, irritant effects of drugs
 derived from,.....17268
 as insecticides. (See *Insecticides*.)
 installation in bronchus,.....12921
 myrobalan, purification and uses, 4907
 oxidation products of unsaturated acids
 of linseed,.....5478
 palm. (See *Palm, oil*.)
 press-cake meals, vit. G in,.....12851
 in seed, chem. and phys. characters,
 watermelon,.....13970
 chem. and qualities, poppy,.....6535
 comp. and utilization, tobacco, 3043
 effect on viability at high temp., 1324
 in *Soja hispida*, climate as affecting,
3046
 in *Solanum villosum*,.....1332
 sunflower, yield correlated with plant
 structure,.....15565
 tissue reactions to natural,.....7437
 vegetable, as fungicides,.....3169
 volatile, of *Cannabis*,.....10284
 in *Carum copticum*, kinetics of forma-
 tion,.....1342
 in costmary, chem.,.....4909
 in drug plants, detn.,.....1329
 expectorant action,.....5758
 in *Illicium parviflorum*,.....1326
 in *Ipomea pes-caprae*,.....10289
 in *Juniperus virginiana*, fractionation,
4905
 in *Kalmia polifolia*,.....6544
 in *Lippia adonis*,.....6553
 in *Magnolia grandiflora* seed,.....1315
 in *Pittosporum monticola*,.....8051
 in *Populus trichocarpa* buds,.....3047
 in *Ruta montana*, chem.,.....10295
 in *Salvia*,.....1341
 Oil, tall, bibliography,.....15684
 Ointments, wound, evaluation technic,
11705
Okanagana (p.1875²) *rimosa*, from Virginia,
1628
 Okell, Charles Cyril, biography,.....14332
16141
 Okra, botulism from home-canned, 17383
Olea (p.1866⁴). (See also *Olive*.)
europaea var. *Mission*, development of
 fruit,.....1172
 Oleaceae (Dicotyledones), p.1866⁴
 Oleacinidae (Mollusca), p.1872²
 Oleander. (See *Nerium*.)
Oleandra (p.1863²), n. sp.,.....1097
 Oleonic acid, chem.,.....15691
 Oleate, ethyl, effect on liver fats,.....5603
 in oil sprays, deposit, pH as affecting,
10460
 Oleomargarine. (See *Margarine*.)
 Oleoresin, analysis in *Pinus*,.....2825
 of capsicum, toxicity,.....13178
 Olericulture. (See *Vegetables*.)
 Olfethreutidae (Lepidoptera), p.1877²
 Olfactometer, descr.,.....1947
 for house flies,.....10473
 Olfactory bulb. (See under *Brain*.)
 Olfactory nerve. (See *Nerve, olfactory*.)

- Olfactory organs. (See also *Nose*.)
 development in birds, 4383, 4384
 of *Diomedea cauta*, 4369
 mode of action, fish, 2196
 study, 237
 Olfactory sense. (See *Smell*.)
 Olfactory tracts. (See under *Nervous system*, central, tracts.)
Oliarus (p.1875¹), n. spp., 8785
Oligochaeta (Annelida), p.1871¹
OLIGOCLADO (Platyh.) (p.1869²), of east coast N. America, 6798
Oligocottus (p.1880²) *maculosus*, life history, 8804
 Oligodynamic action, of silver foil on bacteria, 4664
Oligoneuria (p.1875¹) *ammophila*, 6938
Oligorchis (p.1870⁴) *kwangensis*, in *Galahrysis*, 15992
Oligotoma (p.1875²), tax., 6942, 14278
Oligotrichida (Protozoa), p.1868²
Olisthanella (p.1869²), spp., transf. to *Krumbachia*, 6799
 Olive. (See also *Olea europaea*.)
 botulism from commercial canned ripe, 17883
 cakes, *Aspergillus stellatus* from, 10085
 decaying, *Emericella* from, 13731
 development of fruit, 1172
 knot disease (*Bact. savastanoi*), leaf-scars as infection channel, 12146
 self-sterility in, 15604
 Olive oil, adulterations, detection by fluorescence, 12044
Aspergillus stellatus from, 10035
 iodine number as test of freshness, 12025
 stomach cancer produced by, 7830
Olonia (p.1875²), *Mutrolonia* n. name for, 8785
 Olpidiaceae (Fungi), p.1861²
Olpidiotopsis (p.1861²), tax., 15461
Olyca (p.1877²) *ponderosella*, transf. to *Cahela*, 8792
 Omentum, arteries, in dog, 671
 great, tumor, glomangioma and, 5811
 pexis to kidney, effect on hypertension, 9524
 stretching and relaxation, drugs as affecting, 4355
 use in establishing adventitious renal circulation, 7569
 Omninadin, effect on antitoxin titer of blood in diptheria, 868
Omphalea (p.1866¹), n. sp., 15483
Omphalodotum (p.1862¹), new comb., 6364
Omphalotopus nigrilans, infusion, digitalis-like action, 13167
Omus dejeani, copulation, 17996
Onagra (p.1866²) *Eu-Onothena* hybrids, plastid and plasma inheritance, 7103
 Onagraceae (Dicotyledones), p.1866²
Onchidium jonesianum, note, 6385
Onchocerca (p.1870²), (See also *Onchocercaria*.)
bambusiicola (*Houdemerus* b.), 10546
gibsoni, in cattle, *Culicoides* as vector, 6719
 Onchocerciasis. (See also *Onchocerca*.)
 in negroes, Africa, 12256
 new focus in Kenya Colony, 15960
 in Nyasaland, 6730
 Oncholaimidae (Nematoda), p.1870⁴
Onchidium. (See *Onchidium*.)
Oncohydra (p.1860¹), n. sp., 8385
Oncomelania (p.1872¹) *yaoli*, new host for *Schistosoma*, 10557
 Oncometer, for small organs, 3765
 use in blood osmotic detn., 7302
Oncothorus (p.1863²), n. comb., 4749
Oncothymus (p.1879²), (See also *Salmon*.)
 of Fraser River System, biology, 1873
gorbuscha, homing tendency and age at maturity, 10811
lisutech, *Podocotyle* in, 17938
nerka, mortality during stages of lake residence, 5403
 natural and artificial propagation efficiency, 5402
 pigment, in muscle, 6948
Oncosperma filamentosum, forest management of, 13953
Ondatra (p.1882⁴) *sibethica*. (See also *Muskrat*.)
Giardia in, 6773
 populations, drought as affecting, 5375
 population study, Wisconsin, 12648
 sex ratio, in Minnesota, 14312
 from Virginia, 5243
ONDERSTEEPORTIA (Cestoda) (p.1870⁴), *taeniaformis*, from curlew, 15987
 Onion. (See also *Allium*.)
Borytis infection, 15889
 breeding, 1246
 control of onion fly, 17882
 culture, on muck soils, 1238
 diseases, in Massachusetts, 15889
 mildew (*Peronospora destructor*), survey and control, New York, 3169
 rootrot (*Phoma terrestris*), infection process, 1450
 nature of color change in roots, 15852
 seed production, factors affecting, 15601
 vital staining of epidermal cells, factors affecting, 3068
 Onion maggot(s). (See also *Hylemyia antiqua*.)
 control, 10408
 Onion smut. (See also *Urocystis cepulae*.)
 control by early planting, 3169
 Onion thrips. (See *Thrips tabaci*.)
 Oniscidae (Crustacea), p.1873⁴
 Oniscoidea (Crustacea), p.1873⁴
Oniscus (p.1873⁴), color variations, 12328
 eye structure of blind spp., 5126
Onobrychis. (See also *Sainfoin*.)
antassaitica, culture and variety trials, U.S.S.R., 15553
sativa, cross- and self-fertility in, 4850
Onopordon (p.1867⁴), n. sp., 8444
Onos (p.1879⁴) *cumbrius*, fall spawning period, 3531
Onoseris (p.1867⁴), n. spp., 15500
Onophagus (p.1876²), n. sp., 14248
 Ontogeny. (See *Development*; *Embryology*; *Growth*; *Morphogenesis*; *Phylogeny*.)
 Onychelidae (Myriopoda), p.1873¹
Onychelus (p.1873¹), n. sp., 6829
ONYCHOCYTHERE (Crustacea) (p.1873²), *alosa*, 17973
 Onychomycosis, *Arthrographis langeroni* isolated from, 11643
Onychomys (p.1882²), n. subsp., 18096
 Onychophora, p.1873⁴
 Onychopoda (Crustacea), p.1873¹
Ooehoristia (p.1870⁴) *parvula*, n. nom., for *O. parva*, 1601
 Oocystaceae (Algae), p.1860²
 Oogenesis. (See also *Eggs*; *Gametogenesis*; *Germ cells*; *Yolk*.)
 in biterlings, 13030
 oocytes, development in tissue extracts, 13330
 Oomycetes (Fungi), p.1861²
Oonopsis, as indicator of seleniferous areas, 10179
 Oöphoritis, chemotherapy, 13539
Oospira (p.1863²), n. sp., 15453
citriaurantii, synergism with *Penicillium* in citrus fruit rot, 17747
OOTHYRIUM (Fungi) (p.1862⁴), 17500
 Opalinidae (Protozoa), p.1868²
Opechona (p.1869²), n. spp., 6803
Opecoelus (p.1869²) *gonistii*, 6803
Opegaster (p.1869²), n. spp., 6808
Opegrapha (p.1862²), n. spp., 17503
operculinoides (p.1868²) *f. tax.*, 14196
Ophelia (p.1871²) *cluthensis*, anatomy, tax., 1605, 12306
 Ophelidae (Annelida), p.1871²
Ophiacodon, extensor muscles, reconstruction, 16955
Ophiactis (p.1872¹) *notabilis*, 10553
Ophicephalus gachua, new nematode parasite, 15998
 Ophichthyidae (Pisces), p.1879²
Ophidascaris (p.1870²), n. spp., 14216
labiatopapillosa, in *Amphiuma*, 6716
Ophiobolus graminis, antibiotic effects of soil microorganisms on, 1419
 causing rootrot of cereals, Canada, 10348, 17758
 pathogenicity, as affected by soil fungi, 17821
 on wheat, dissemination and longevity in soil, 8602
 pathogenicity as affected by N and soil factors, 14088
 pathogenicity of different isolates, 17820
 soil factors affecting, 6668
mygabeanus, on rice, effect of light on virulence, 4991
 Ophioglossaceae (Pteridophyta), p.1863¹
Ophioglossum (p.1863¹), n. sp., 6376, 17508
 ecology and distr. in India, 4756
 monograph, 2815
 Ophiopeltidae (Echinodermata), p.1872¹
OPHIOPNEUMICOLA (Acarina) (p.1874²), n. sp., 1617
Ophiorrhiza (p.1867²), in Japan, key, 2874
OPHIOSPHERIA (Fungi) (p.1861⁴), 15453
Ophiotaenia (p.1870⁴), sp. in *Amphiuma*, 6716
congolense, in snakes, 15992
Ophiotrichia (p.1872²), n. spp., 10552, 10553
 Ophiotrichidae (Echinodermata), p.1872¹
Ophiotaurus (p.1880²) *apus*, Jacobson's organ, form and function, 15000
Ophiuchus (p.1875⁴), new species from Australia, 18016
Ophiura (p.1872¹) *marylandica* (N), reconstruction of, 5112
 Ophiuroidea (Echinodermata), p.1872¹
 ecology, 8877
 Ophthalmia. (See also *Xerophthalmia*.)
 bilateral, in pneumococcal septicemia, 17312
 keratitis, expt'l. syphilitic, rabbit, 16896
 vascular obliteration for, and nutrition of corneal epithelium, 9474
 kerato conjunctivitis sicca, relation to glandular insufficiency, 4197
 pan-, etiology, lesions, 2384
 sympathetic, etiology, lesions, 2384
 mechanism, 6076
 Ophthalmology, iontophoresis studies, 3550
 measurement of aniseikonia, 3600
 method and apparatus for detn. of pupil width, 1948
 microscopy of eye, 3
 parallaxoscope, descr., 9471
 shock and fever therapy in, 13432
 use of u.v. light in, 13066
 vitamins in, 16500
OPHYRPETALUM (Dicot.) (p.1865³), 15483
 Opiliones (Arachnida), p.1874¹
 Opilionidae, behavior notes, 17987
Opisocrostitis (p.1878²), n. spp., 18035
 from prairie dogs, 18036
 Opisthobranchia (Mollusca), p.1872²
Opisthoglyphe (p.1870²) *ranae*, life cycle, 10542
 Opisthorchidae (Platyhelminthes), p.1870⁴
Opisthorchis, life span in vitro, factors affecting, 8688
felineus, liver lesions, ruminants and swine, 12260
 Opium, addiction, glucose in treatment of abstinence symptoms, 5740
 alkaloids. (See also *Codine*; *Morphine*; *Papaverine*.)
 analgesic action, 9537
 effect on bladder, 528
 on cilia of respiratory tract, 5750
 in fumes, 5751
 habituation to, by tissue culture of iris epithelium, 16785, 16786
 pharm., 12643
 Opossum. (See also *Didelphis*.)
 acute endocarditis in, 16729
 brain, development of bloodvessels in, 15071
 end arteries, regeneration, 4323
 diencephalon, nuclear pattern, 16969
 dorsal interosseous muscle, development anatomy, 4311
 embryology, book, 735
 sexual development, sex hormones as affecting, 9349
Oppia (p.1874⁴) *elongata*, tax. note, 17982
Opsanus tau renal and vascular response to epinephrin, 11093
 Opsonin(s). (See also *Antibodies*, *Phagocytosis*.)
 in blood, asphyxia as affecting, 7359
 index, local novocain anesthesia as affecting, 13507
 production, u.v. irradiation of body as affecting, 14505
 Opsonophagocytic test, in brucellosis, stain technic for, 9984
 Optic, nerve. (See *Nerve, optic*.)
 tracts. (See under *Nervous system*, central, tracts.)
 Optical activity. (See also *Asymmetry*, *molecular*; *Isomerism*.)
 of glucosides of sterol and sex-hormone series, 3869
 specificity, microbial dissociation as affecting, 6324
 Optics. (See *Eye*; *Vision*.)
 Optochin. (See *Ethylhydrocupreine HCl*.)
Opuntia (p.1866²), in dung of ground sloth, 7048
inermis, as forage crop, 17599
 Opuntiales (Dicotyledones), p.1866²
 Orange. (See also *Citrus*.)
 ascorbic acid in, factors affecting, 13381
 fetola disease (physiogenic), symptoms and environmental relations, 6660
 juice, effect on Ca metabolism, rat, 16447

- lead arsenate and Cu carbonate as affecting, 8639
loss of acid from, O and N as affecting, 12094
pineapple, pitting and blue mold, transit temp. as affecting, 15866
protecting orchards from frost, methods, 15600
psoriasis (virus), symptoms and control, Tucuman, 8610
skin injury, position in box as affecting, 10221
storage, ventilation as affecting, 10232
storage and comp., at low temp., 1273
sugars and pectin dist. in rind and pulp, 6662
sweet, history of introduction into Europe, 1280
variety tests, California, 8497
volatile products, tainting of foods by, 10042
waste, as fertilizer, 15617
yield, heating orchards as affecting, 15599
- Orange tortrix*. (See *Argyrotaenia citrana*.)
Orang-utan(s). (See also *Pongo*.)
blood groups, and comparisons, 4535
..... 13521
coronary arteries, anatomy, 8012
frontal sinuses, development, 9717
genital swelling during pregnancy, 3076
male, description, 8023
ovary, structure in pregnancy, 695
- Orania* (p.1864⁴), n. spp., 10121, 11864
Orbignya (p.1869²), phylogeny, 15981
Orbitoididae (Protozoa), p.1868³
Orchard(s). (See also *Horticulture*; *Pomology*;
Fruits; *Fruit trees*; and especially under kinds of fruit, e.g.,
Apple.)
apple and raspberry, controlling temp. in, 6512
cover crops, tolerance to soil As, 15933
fruits, spray schedules, for Ohio, 14091
heaters, types compared, 1276
heating, effect on yield, oranges, 15599
leaf areas, sprays as affecting, 17862
protecting against frost, methods, 13906
soil erosion in, control, 11988
soils, lateral distr. of K in, 13855
O₂ and CO₂ in, 13866
pore space in, measurement, 13850
potassium availability in, 13852
soil and water conservation in, contouring and terracing as affecting, 13867
windbreaks for, construction, 15616
- Orchard grass. (See *Dactylis glomerata*; *Grass*.)
Orchestia platensis, as interm. host to poultry cestode, 10477
Orchidaceae, absorption of water by roots, factors affecting, 12062
culture, Ceylon, 8509
mycorrhizal fungi, symbiotic relationship, 10779
seed germination, vit. requirement, 6571
- Orchidaceae (Monocot.), p.1865¹
Orchidales (Monocotyledones), p.1865¹
Orchis (p.1865¹), asymmetrical mitosis in microspore, 12504
of Europe, monograph, 4767
significance of polyploidy, 12526
constricta, syn. of *Habenaria campoceras*, 2842
spectabilis, new white form, 4775
- Oreasteridae (Echinodermata), p.1872¹
Oreocneta (p.1882¹) *horsfieldi* affinis, note on, 8827
Oreonebria (p.1876¹) *rautleri* ssp. *henrothi* (J), 3327
Oreopanax (p.1866³) *dissecta* n. comb. (N), 10099
- OREOPSOCUS** (Corrodentia) for *Poscus montanus*, 12414
Orestes (p.1872¹)(f), preoccupied, 14231
Oreta carnea, occurrence in tropical forest, 8977
- Organ(s). (See also *Viscera*.)
Ackerknecht, occurrence in primates, 7929
allergy in, cellular function, 4531
anaerobic glycolysis, heterotransplanted tumors and, 13231
arginase action, fasting and diet as affecting, 12677
liver damage and fasting as affecting, 12668
carcinoma, frequency in U. S. Navy, 4216
cholesterol increase on feeding, guinea pigs, 13263
choline esterase in, pig, 3554
- covered by serosa, sound production by, 13130
deposition of radioactive substances, mice, 4189
emulsions, effect on detoxicating action of liver, 16569
parenteral inj., effect on pulmonary blood lipase, 16429
extracts, effect on growth of kidney tissue in vitro, 751
on vaccinia virus, 15222
fat tissues, changes in exophthalmos, 14973
fixed, cholesterol in, 5917
with fixed vol. vasomotor responses in, 12643
glutathione in, young animals, 10958
immunity to Brown-Pearce carcinoma, rabbits, 4200
- as influenced by:
acetone inhalation, 14993
anoxic and insulin shocks, 4299
diphtheria, 16898
nephrectomy, rats, 7708
sex hormones, 11062
short waves, 9105
inheritance of differences, guinea pig, 14374
lead in, man, 10989
O₂ consumption and blood flow during perfusion, 12643
path. changes in brain implanted tumors, 16883
in cancer of pancreas, 14879
in silicosis, 7924
phospholipids in, man, 16377, 16378
pneumococci antigen relations, 6112
protein distr. in, 12643
secretory, standardization of substances affecting, 222
sensibility, 4333
sites of aneurisms, syphilis and, 4089
surviving, O₂ utilization, 5531
tryptophane in, rats, 4227
tumor incidence in, India, 7844
type-specific M and N factors in, 17233
vascular thrombosis, etiology, 16880
vit. C in, changes in avitaminoses, 13275
- Kan's Ag reaction and, 341
wound healing as affecting, 331
weight, body wt. and, formulae, 9210
mice, 717
organ work as affecting, 7465
ovariectomy as affecting, rats, 13302
- Organic matter. (See also *Humus*.)
of Wisconsin lakes, 7233
Organic muds, descr. and types, 122
Organism, kingdoms, 5267
Organization centers. (See *Morphogenesis*.)
Organizers. (See *Morphogenesis*.)
Organotropism. (See under *Tropisms*.)
Orygia (p.1877¹) *antiqua*, morph. of abdominal somites, 3358
- Oribatidae (Arachnida), p.1874¹
Oriental sore. (See *Leishmaniasis*.)
Orientation. (See *Behavior*; *Tropisms*.)
ORIENTUS (Homopt.) (p.1875⁹), 1629
Organum hirtum, as adulterant of majoran, microscopy, 6546
Ormenis (p.1875⁹), *Melormenis*, n. name for, 8785
Ormyrus (p.1878⁸), morph., phyl., 1632
Ornamental(s). (See also *Bulbs*; *Floriculture*; and under the plant spp. used as ornamentals.)
annuals, new vars., 11977
Aster and *Erigeron* as, 11985
breeding and selection, Fla., 8495
Colchicum as, 11973
cultural requirements, simplified method of indicating, 17630
Cupressus spp. as, Calif., 8514
diseases, California, 1482
in U. S. A., 1938, 15890
diseases and pests, handbook, 14098
forcing, use of light in, 1225
Gaultheria as, 11972
hardy, for Michigan, 1286
insect pests of roots, control, 1526
of Mexico, 10294
Pernettya spp. as, 11989
rock, for Ohio, 2977
root production, growth hormones as affecting, 3063
rooting of cuttings, growth substances causing, appl. methods, 15706
seed viability, moisture and temp. as affecting, 17692
Torreya californica as, 3011
trees and shrubs, card file, 8506
Viburnum as, U. S. spp., 6524
wind-hardy, for England, 10214
woody, for California, 1266
- Ornithine, prep. by enzymatic methods, 5487
Ornithischia (Reptilia), p.1880⁴
Ornithodoros (p.1874²) *hermsi*, as vector of relapsing fever, 4669
parkeri, distr. and hosts, 15296
talaje, in California, 8278
as vector of pinta, 11638
tholozani, as vector of *Spirochaeta persica*, 10011
turicata, longevity, 2670
Spirochaeta recurrentis longevity in, 2670
- Ornithogalum* (p.1865¹) *alatum*, 10119
Ornithology. (See also *Birds*.)
textbooks, 16089, 16098
Ornithorhynchidae (Mammalia), p.1882¹
Ornithorhynchus (p.1882¹) *anatinus*, hairs, cuticular-scale pattern, 7979
Ornithosuchidae (Reptilia), p.1880⁴
Orobainosoma (p.1873²), n. sp., 16014
Orobainosomidae (Myriopoda), p.1873²
Orobanchaceae (Dicotyledones), p.1867²
Orobancha (p.1867²), host-parasite relations, 15817
Orochlesis (p.1876³) *ater*, 16034
Oropeha (p.1865³), n. sp., 13755
Orsanine, As derivatives of group, serol. specificity, 13447
- Ortalidae (Diptera), p.1877¹
Ortalis (p.1881²), food habits, 9064
Orthocarpus (p.1867²), n. sp., 6399
Orthocladus fusiformis, nymph and adult, 12366
Orthodigraph. (See *X-ray*; *photography*.)
Orthodichlorobenzene, as soil poison for termites, 10463
Orthoptera (p.1875⁵). (See also *Cockroaches*; *Grasshoppers*; *Locusts*; etc.)
eggs, enzymes in developing, 1889
tyrosinase in, x-rays as affecting, 12704
as interm. hosts of poultry nematode, 10478
Malpighian tubules, reaction with vital stains, 8949
of Oklahoma, 1822
phylogeny, 1635
Orthoptics, uniform procedure in, 7647
Orthorhapha (Diptera), p.1877²
Orthorrhinus (p.1876²) *patruelis*, on cocoa, New Guinea, 8636, 14107
Orthosiphon spp., leaves of, drug standards for, 3049
Orthotrichaceae (Bryophyta), p.1868³
Orthotrichum (p.1863³), n. spp. in Japan, 1095
- Orycteropodidae (Mammalia), p.1883³
Orycteropus (p.1883³) *pygmaeus*, skull, 5238
pygmaeus, skull descr., 1655
Oryctes nasicornis, regeneration of antenna, 435
- Oryza sativa*. (See also *Rice*.)
Oryzaeae (Monocotyledones), p.1864²
chromosomes, number, form and taxonomic significance, 5290
Oryzias latipes, development, 2, 4-dinitrophenol as affecting, 9774
Osage-orange. (See *Maclura*.)
Oscillatoria (p.1860⁰), n. sp., 8385
thermal spp., 6335
Oscillatoriaceae (Algae), p.1860⁰
Oscillatory system, in etiology of cancer, 13209
Oscillotaxis. (See under *Tropisms*.)
Osier(s). (See *Salix*; *Willows*.)
Osmanthus (p.1866⁴), n. sp., 4785
extra-floral nectaries, 10144
Osmeridae (Pisces), p.1879²
Osmerus (p.1879²). (See also *Smelt*(s).)
eperlanus, with hermaphroditic gonads, 14285
Osmia aurulenta, note, 6927
Osmodroma scabra, *Thelastoma* from, 17950
Osmometer, descr., 7293
Osmosis. (See also *Absorption*; *Diffusion*; *Membrane*; *Osmotic pressure*; *Permeability*; *Plasmolysis*; *Swelling*; *Ultrafiltration*; *Water*; *absorption*.)
Osmotic pressure. (See also *Osmometers*; *Osmosis*; *Salinity*; *Turgor*.)
in algae, plasmolytic vs. cryoscopic detn., 13994
of blood. (See under *Blood*.)
in conifer leaves, colloids as affecting, 13995
detn., apparatus for, 7293, 7301
in biological fluids, 7291
effect on root hairs, 8565
in grass leaves, factors affecting, 13996
in guard cells and stomata, relation to movement, 10339
of hemolymph, mosquito larvae, 3655

- Osmotic pressure (*continued*)
 indoleacetic acid as affecting, *Pisum*
 and *Helianthus*, 4919
 latex bleeding as affecting, *Ficus*, 6626
 in marsh plants, 4940
 in oat plants, water content of soil as
 affecting, 17690
 in organs and blood, water and drugs
 as affecting, 16811
 in parasitic fungi vs. that of hosts,
 15862
 in plant cells, review, 3075
 of plant saps, causes and detm., 3074
 relation to turgor tension, 5582
 in steppe plants, 5379
 of urine, 3950
 in *Valonia* cells, effect on penetration
 of electrolytes, 3073
Osmunda (p.1863³) *javanica*, cyt. of
 apogamy and apospory, 6375
 Osmundaceae (Pteridophyta), p.1863³
OSMUNDOPTERIS (p.1863³), tax., 6376
 Osprey, prey, 5177
Ossaea (p.1866³), n. spp., 2882
 Ossification. (See *Bone formation*; *Calcifi-*
cation.)
 Osteoarthritis, peripheral circulatory dis-
 turbances and, 5836
 Osteogenesis. (See *Bone, formation*.)
 Osteoglossidae (Pisces), p.1879²
 Osteology. (See *Bone*; *Skeleton*.)
 Osteomalacia, Ca and P metabolism in,
 ultraviolet as affecting, 10990
 dwarfism and, 4264
 etiology, with psychosis, 2411
 with and without nephritis, acid and
 alkali ingestion as affecting,
 14669
 Osteomyelitis, acute staphylococci, 4627
 specific immunity to, factors in,
 15164
 carcinoma and, 16869
 in Hodgkins's disease, 600
 hypotension in, etiology, 18103
 maggot vs. chemo-therapy, 17256
 mortality from, 18492
 staphylococci chronic, antigens and
 antibodies, inflammatory tissue
 as affecting, 6058
 visceral hemorrhages in, cause, 13416
 Osteopetrosis, etiology, hist. path., 7869
 Osteoporoses, demineralization of bones,
 relation to rickets, 18772
Ostertagia (p.1870³), in *Hydrophotes*, 1604
 in lambs, nutrition as affecting, 6728
 Ostrimidae (Coleoptera), p.1876¹
Ostracoda (Crustacea), p.1873¹
 fossils, Carboniferous, of Illinois, 8630
 zoogeography of *Gomphocythere*, 10569
Ostracophori, p.1878³
Ostrea (p.1872³). (See also *Oyster*.)
commercialis, winter mortality and life
 history, 12631
edulis, larvae, setting behavior, 10805
 life history and culture, book, 14406
gigas, larval development, factors af-
 fecting, 5407
virginica, biology, 10808
 sex-ratio equations, 3296
 Ostreidae (Mollusca), p.1872³
 Ostrich. (See *Struthio*.)
Otaria ursina, bile acids, 12908
 Otariidae (Mammalia), p.1883²
 Otididae (Aves), p.1881²
 Otis, Ira C., biography, 16144
 Otitis, media, in scarlatina, incidence and
 therapy, 11718
 mycotic, autogenous vaccine therapy, 4485
 pneumococci type-1, 983
 Otitis, in rats, control, 11803
 Otolaryngology, allergy and, 15147
 Otolith(s), prep. for exam., 6058
 Otorhinolaryngology, complement titer
 before and after surgery, 2587
 Otter, bile comp., 9261
 fishing, swimming powers, food habits,
 18105
 southern sea, habits, 5224
Otus (p.1881³) *asio* sampled, 10651
flammeolus, territorial behavior, food,
 7011
senegalensis ssp. *distans*, 18061
 Ouabain. (See also *Digitalis*.)
 dosage for rabbit, 18178
 effect on:
 chromatophores, toad, 5761
 heart, frog and toad, 514
 thiobarbiturate action on heart, 525
 intestinal absorption, rat, 5593
 sensitivity in dog, 12643
 Ovalbumin. (See *Albumin, egg*.)
 Ovary (animal). (See also *Egg*; *Gonad*;
Ovulation; also such related sub-
 jects as *Menstruation*; *Estrus*; etc.)
 Ovary (animal) (*continued*)
 ablation. (See also *Gonad ablation*.)
 in cat and dog, 15387
 effect on:
 adrenal gland, rat, 14608
 antibodies in serum, 2130
 endocrine glands, 3801
 excitability of uterus, 9326
 genital tract of bitches, 14674
 gland weights and hypophyseal
 gonadotrophic content, rat,
 16618
 hyperthyreosis and liver glycogen,
 14653
 organ wt. and measurements, 13302
 survival after adrenalectomy, 3852
 thymus, rat, 5614
 tubal contraction, rabbit, 16638
 tumor malignancy, mice, 14899
 ova transport as influenced by
 estrogen after, mouse, 5651
 specific dynamic action tests after,
 3871
 activity, effect on endometrial cycle,
 human, 7587
 adaptation to damaging agents, rat,
 12643
 adenoma, simulating Cushing's disease,
 14956
 blood vessels in relation to age, 13293
 carcinoma, genetic and endocrine
 studies, 609
 cells, cytology, 2466
 changes during estrus, 7975
 corpus luteum, activity, effect on lacta-
 tion, rabbit, 9417
 pregnandiol excretion studies, man,
 5648
 gravidum, hysterectomy and placenta
 as affecting, guinea pig, 14682
 as influenced by:
 estradiol, testosterone and pro-
 gesterone, 11069
 progesterone during reproductive
 cycle, mouse, 16665
 testosterone, 12954
 maintenance by estrogens, rabbit,
 9316
 physiology, 11405
 uterine motility cycle and, guinea
 pig, 7586
 in viviparous snakes, 7589
 cycle, factors controlling, 11102
 cysts, in benign transplanted breast
 tumors, 16857
 development, pituitary treatment and
 rat, 7585
 dysfunction, effect on blood coagulation,
 14924
 rôle in etiology of obesity, 14961
 effect on mammary cancer, mice, 16837
 effect of opening bursa on fecundity
 rat, 7590
 embryonic development, 17038
 extracts, effect on growth of tumors in
 mice, 584
 estrogenic. (See *Estrogens*.)
 luteal. (See also *Pregnandiol*; *Pro-*
gesterone.)
 androgenic action, 14636
 chem. and properties, 9291
 color reaction with furfural and
 H₂SO₄, 16383
 effect on menstruation, 14678
 pregnenolone, activity, 9320
 of fowl, unusual activity, 17100
 histology, estrogens as affecting, 16980
 hormones, carcinogenesis and, 5808
 cyclic release, time relations in, rat,
 12643
 effect on differentiation of trans-
 planted halves of embryonic
 genital primordia, mouse, 12643
 endometrial changes in menstruation
 and, 9647
 oviductin, formation in bitterling,
 18030
 in pregnancy serum, chem., 3791
 in urine, source, 9286
 as influenced by:
 extracts of green leaves, 9306
 gonadotrophic chorionhormone, 4294
 gonadotrophic extracts, monkey,
 11052
 rats and pigeons, 9640
 hexoestrol, 16596
 hyperthyroidism, rat, 12643
 irradiation of pituitary, 202
 Jensen sarcoma, rat, 4190
 menopausal urine, immature cat,
 16633
 period of adm. of pregnant mare
 serum, rat, 12949
 Ovary (animal) (*continued*)
 as influenced by (*continued*)
 post-pituitary extracts, rat, 3808
 pregnancy urine and serum, monkey,
 5626A
 prolactin, hypophysectomized mice,
 12948
 previous adm. of thyroxin as affect-
 ing, 11404
 tar and, rôle in carcinogenesis,
 mice, 7837
 tumors and, mice, 4269
 testosterone, 3792, 3917, 9846
 thyroid ablation, fowl, 11055
 urine of castrate ♀, 5624, 5625
 uterus ablation, 9412
 x-rays, guinea pig, 5644
 innervation, 687
 interstitial cells, action and disposal in
Hydra, 11463
 as endocrine cells, origin, review,
 15020
 reticulo-endothelial function ques-
 tioned, 11418
 interstitial stroma cells, storage of dyes
 and, 11417
 luteinization, effect on survival of
 adrenalectomized rats, 7539
 maturation of eggs, pituitary extracts
 as affecting, frog, 7543
 mesothelial membrane, permeability,
 10835
 parthenogenic cleavage in, 17057
 of rats in E avitaminosis, ovarian and
 thyroid hormones as affecting,
 hist., 7965
 refractoriness to gonadotrophic ex-
 tracts, 12950
 structure, during pregnancy, 695
 teratoma, origin of argentaffine carci-
 noma, 14908
 transplantation, crossing over in,
Drosophila, 7154
 (animal), transplanted, effect on eye
 and egg color, *Bombyx mori*, 7159
 into mesentery, action of hormones
 after, 381
 tumors, masculinoblastoma, 11289
 statistical analysis, Belgrade, 13206
 uterine control, pregnant hamster,
 11106
 Ovary (plant). (See *Carpel*; *Gynoeceum*;
Ovule; *Pistil*.)
 Ovenbird, descr. and life history, book,
 8840
 Ovidae (p.1883³), fibre follicles, arrange-
 ment, 13286
 Oviducts, development, sex hormones as
 affecting, 17048
 duplication in fowl, 17105
 effect of resection of chalaziferous
 region, 5666
 Fallopian tubes, cytology in bats, 9426
 nerve net, structure in mammals,
 16013
 peristalsis, testosterone as affecting,
 man, 12953
 gonadotrophic substances as affecting,
Bufo, 7963
 of hens, fluke in, dragonfly as vector,
 12258
 testosterone as affecting, alligators,
 16983
 Ovinia. (See *Varicola, ovina*.)
Ovis (p.1883³). (See also *Sheep*.)
 -*Capra* hybrids, chromosome studies,
 54
ammon hodgei, dist., habits, 5223
canadensis, Cornea, vascularization, 2433
 Ovulation. (See also *Egg(s)*; *Estrus*;
Menstruation; *Ovary*; *Pregnancy*.)
 in amphibia, zoological specificity of
 gonadotrophins, 14675
 in bedbug, 18012
 direct current potentials associated
 with, 12643
 factors affecting, review, 14639
 as influenced by:
 estrin, monkey, 9413
 extracts of green leaves, 9306
 sex hormones, 11405
 testosterone, 3792, 12954
 inhibition by intact pituitary, frog,
 3900
 ovum growth and, 13888
 in *Xenopus*, as pregnancy test, 13039
 Ovule(s). (See also *Carpel*; *Embryo sac*;
Embryogeny; *Gametophyte*; *Gynoe-*
ceum; *Pistil*; *Seed*.)
 abortion, genetics, *Oenothera*, 16192
 of *Cetiba*, hair development, 4311
 development in *Carex*, 6448
 in *Saxegothaea*, 11921
 in *Urginea*, 11912

- morphology and development in *Sequoia*,6440
nature of funiculus in Polygonaceae,8450
stalk, Polygonaceae, etc.,8450
teratology, *Salix*,1169
Ovum(a). (See *Egg*; *Embryo*.)
Owl, *Brachylaemus* (Platyhelminth) from,12293
owllet, pearl-spotted, "false face" of,7035
pellets, teeth and bones of collared lemming in (Pl), Switzerland,10667
salivary glands, innervation,4328
saw-whet. (See *Cryptoglaux*.)
Ox(en). (See *Cattle*.)
Ox warble fly. (See *Hypoderma bovis*.)
Oxalacetic acid, detn., manometric, 16301
in plant tissues, occurrence and significance,15766
Oxalate, buffer, Mg effect, NaCl as affecting,7251
in diet, rickets produced by,12860
ion fixation,16297
Oxalic acid, in blood. (See under *Blood*.)
effect on blood coagulation time, 16425
on tissue metabolism,10968, 10969
excretion, diet as affecting, rabbits,12826
in foods and metabolism, rat,16459
metabolism in cases of renal calculi,7452
poisoning, effect on kidney,411
in urine. (See under *Urine*.)
Oxalophytes. (See *Silicicoles*.)
Oxidation(s). (See also *Metabolism*; *Respiration* (plant).)
of alcohol in vitro, glucose as affecting,3687
of amines and amino acid isomers, pyrolysis as affecting,206
bacterial, mechanism,13678
of butyric acid derivatives by kidney tissue, guinea pig,9199
enzyme-coenzyme systems catalyzing, growth substances and,4714
hypochlorite, of plant residues,17432
inactivation of virus by, prevention,8608
morphine derivatives as affecting,18178
photochemical. (See *Photodynamic action*.)
in plants, relation to sex,6558
reactions, review,7245
reduction. (See also *Reduction*.)
aerobacilli differentiated by,2761
anaerobic sporiferous bacteria differentiated by,2759
in animals, rôle of photoxan in,17669
bacterial, carbohydrate metabolism as affecting,2761
biological, book,16329
review,14440
enzymic, sulphhydryl groups and, 195
equilibria, law of mass action in,5433
of hemolytic streptococci, sulfanilamide compounds as affecting,6157
immunological rôle, review,2531
indicators. (See under *Indicators*.)
in melanin, and use as indicator,12709
in plants, relation of N to,1354
potential, of acetoacetic acid- β -hydroxybutyric acid system,7285
measurement, basis and significance,9109
review,7245
in shake media, detn. at different levels,11873
of skin in vit. C deficiency, 16392
of soils, detn.,10212
factors affecting,13803
of vibrios,6316
processes in choroid plexus secretion,1964, 1990
in sulfanilamide solns.,12707
relation to geotropism, roots,4921
tissue, vanadium as affecting,207
of vit. C in tissues,2073, 3733
Oxidizing agents, disinfectant action on molds,17397
effect on bilirubin,16323
on proteases,3094
sulfanilamide plus surviving tissues forming,17253
Oxyaenidae (Mammalia), p.1883¹
giant, from Mongolia,7043
Oxybenzoic acid, p-. (See *Benzoic acid*, p-hydroxy.)
Oxycephaly, increased intracranial pressure in,18407
Oxycoecus macrocarpos, in California, 2854
Oxydesmidae (Myriopoda), p.1873²
Oxydesmus, morph. and tax.,8748
Oxygen. (See also *Air*; *Atmosphere*; *Oxidation*.)
absorption by *Vicia* roots,6559
adm., methods,7327
in blood. (See under *Blood*; *Hemoglobin*.)
consumption. (See also *Metabolism* (respiratory and energy); *Metabolism* (tissue and cellular); *Respiration* (plant).)
of ascorbic acid, factors affecting,286
deficiency, resistance to, diet as affecting,2007
detn., in blood,3589
dropping Hg electrode for,5499
in water, method,3527
diffusibility through animal membranes,12650
dissociation curve, of hemoglobin. (See under *Blood*.)
effect on:
activity of lipase,9095
amylase activity in leaves,12106
antiproteolytic action of As, Bi and Hg,13178
bioelectric potentials, *Hallicystis* protozoa,5395
blood plasma volume,13129
carotid sinus receptors,14754
cerebrospinal pressure,7705
disappearance-reaction of amino N in liver extracts,5825
dormancy, lily bulbs,17697
potato tubers,12075
electric polarity caused by light, *Chara*,4952
erythrocytes in sickle cell anemia,16912
exercise tolerance in angina pectoris,16743
life of *Opisthorchis* in vitro,8688
loss of acid by oranges,12094
root hairs,8565
seed viability, cotton,4825
elm, in storage,6584
smooth muscle at high barometric pressure,12643
indicator for, in anaerobic cultures,8272
inhalation, in bronchopneumonia, dogs,10893
effect on cardiac effects of low atm. pressure,479
on insulin convulsions,4136
intravenous, respiratory and circulatory responses to, anoxemia and,14593
lack. (See also *Anaerobiosis*.)
acute, signs,12643
cerebral lesions in,2115
effect on:
blood colloid osmotic pressure and proteins,12761
brain pH,12643
brain potentials,463
coronary circulation, dog,12643
dark adaptation curve,14700
electrocardiogram,18128
heart glycogen,7706
marine animals,3667
metabolism in heart-lung prep., dog,9184
pupillary reflex,5699
respiration, frog,9274
respiratory and circulatory adaptation in silicosis and cardiovascular disease,2423
schizophrenia,655
urine flow from denervated kidneys in adrenalectomized dogs,12643
hypoglycemia and,12643
O₂ consumption of tissues after, frog,16471
in production of renal vasoconstrictor substance,7731
shock, insulin shock and, anat. changes,4299
vasomotor reaction,16731
molecular, effect on spirochaetocidal activity,17244
in orchard soils,13866
poisoning, causative factors in,7331
effect on cardiac tissue,9494
production by plants, nitrates as affecting,14008
rôle in luminescence of ctenophore,1901
Oxygen (continued)
rôle (continued)
in vernalization of cereals, relation to temp.,1188
stratification of dissolved, in Japanese lakes,14404
tension, effect on:
edema formation, frog web,258
formic dehydrogenase,14452
proteolysis,9093
tubercle bacilli,12643
high, effect on:
bar-eye, *Drosophila*,1776
erythrocytes, rabbits,13249
erythrocyte count and Hb, 14587
erythrocyte size,14583
muscle,4038
of inspired air, effect on response to CO₂, man,12643
low. (See also *Altitude*, high; *Anoxemia*.)
effect on:
blood pressure, hypoglycemia, adrenals and,7544
dark adaptation,13056
electrocardiogram in coronary insufficiency,4083
peripheral circulation,4065
Protozoa,12643
sympathectomized dog,7411
in therapy of asthma and emphysema,11042
of compressed air illness,11372
of post-puncture and barbiturate reactions,12643
threshold for 3 spp. of fish,5411
use in thiobarbiturate anesthesia,525
utilization in body, continuous recording,7362
CO₂ as affecting, fish,12643
Oxygonum (p.1865²), n. spp.,2828
Oxyhemoglobin. (See under *Hemoglobin*.)
Oxymitra (p.1865³) *gabriaciana*, transf. to *Goniolalamus*,8430
Oxyporhamphus (p.1879³), status,3374
Oxyrhyncha (Crustacea), p.1874²
Oxyrrhis marina, structure, reproduction, and nutrition,8715
Oxystomata (Crustacea), p.1874³
Oxytetric acid, absorption spectrum,2069
Oxyuramus scutellatus, venom, action and treatment,5164
Oxyuriasis. (See also *Enterobius* and other genera.)
chemotherapy,17282
diagnosis,14192
efficiency of methods,15971
epidemiology, Washington, D. C., 5089
incidence, in white children,10488
ova in household dust,10505
treatment,14192
Oxyuridae (Nematoda), p.1870²
Oxyuris (p.1870²) *acuticaudata*, from *Petauroides*,14214
vermicularis, heat therapy,8240
† Oxyurogoda, phylogeny,12333
Oyster(s). (See also *Ostrea*; *Shellfish*.)
biology and culture,7240
as fouling organisms, ecology,10793
life history, nutritive and therapeutic value, book,14406
spawning, factors affecting,5407
tissue salt conc.,9152
water producing, sanitary analysis, 996
Oyster-shell scale. (See *Lepidosaphrea*.)
Ozamia (p.1877²) *punicans*, on *Cereus*,8792
Ozena. (See also *Klebsiella ozenae*.)
constitutional deafness and,4285
P
Paai disease. (See *Quebracho*.)
Paca, exptl. echinococcosis in,12248
Pachycephala (p.1882²), n. spp.,7013
Pachymetatus (p.1878³) *scutellatus*, natural enemies,10431
Pachyptila (p.1881¹), bill formation in,5183
Pachytista (p.1864³) *gigantea*, seeds, structure of (Cb),15431
Packages, paper, for perishable foods, sanitary condition,13652
Packing, case, of hemlock, protective film of pyrethrum oil on,3192
of oranges, position in box as affecting skin injury,10221
plants, meat, prevention of bacterial contamination and spoilage in,15395
Paddy. (See *Rice*.)
Padouk wood. (See *Pterocarpus*.)

- Paeonia* (p.1865³). (See also *Peony*.)
 Western American spp., 2884
 moutan, color changes in stained material produced by nucleolus, 10714
Paepalanthus (p.1864⁴), N. and Central American spp., 4769
Paguridae (Crustacea), p.1874²
Paguridea (Crustacea), p.1874²
Pagurus (p.1874²), spermatophores, composition, 12778
Pahudia spp. use in forestry, 4884
 Pain, in back, in diagnosis of myeloma, 571
 bulbo-protuberant, theory, 7650
 chemical mediator, histamine as, 12643
 congenital insensitiveness in children, 560
 effect on circulation in extremities, 5722
 facial, surgical treatment, 7668
 ischemic, ions as affecting, 12643
 magnetism as affecting, 4117
 morphine as affecting, 13178
 sensation of skin, erythema, edema and, 5698
 sensitivity, touch as affecting, 7652
 study, 239
 theories, review, 7650
 threshold measurement with thermal radiation, 12643
 Paint industry, phthalic anhydride in, sensitization to, 13443
Palaemon, *Phyllostomum* in, 1595
squilla, parasitized by *Bogyrus*, resistance to dilution of sea water, 7186
Palaemonidae (Crustacea), p.1874²
Palaemonoidu (Crustacea), p.1874²
Palaedictyoptera, p.1875¹
Palaeniscidae (Pisces), p.1879¹
Palaepagurus (p.1874²) † *schattenbergi* (J), 15943
Palaquium gutta, leaf, structure and chemistry, 4908
 Palate, soft, musculature, function and innervation, 7950
 Paleobotany. (See *Paleontology*.)
 Paleocology. (See *Pollen analysis*; *Post-glacial vegetation*; etc.)
 Paleontology. (For material indexed geographically, see *Geographic Index*, p.1884. For material indexed by geological periods see *Paleontological Index*, p.1893. For material indexed systematically, see *Systematic Index*, p.1860. See also *Fossils*.)
 fossil diatoms, Finland, 2780
 origin of V in sedimentary deposits, 14155
 paleobotany, history, America, 15429
 methods of study in, 4722
 seed development, paleozoic of modern, 15431
 taxonomy and nomenclature of Cretaceous and Tertiary plants, 4723
 value of ecological concepts and methods in, 4723
 phylogeny of vascular plants, résumé, 2905
 stratigraphy, significance, western America, 2781
 textbook, 14342
 type specimens in Univ. Colorado, 1388
 vertebrate, causes of extinction of sp., 5081
 Paleozoology. (See *Paleontology*.)
Palaicourea (p.1867³), n. spp., 6429, 6437
 Palladine, V. I., biography, 23
Pallavicinia (p.1863⁴) *lyelli*, the nucleolus-chromosome, 5295
 Palligen, proprietary syphilis vaccine, evaluation, 11669
 Palm(s), coconut. (See *Coconut*.)
 date. (See *Date palm*.)
 for genetic study, 8929
 oil. (See also *Elaeis*.)
 stem root due to *Fomes noxius*, 3114
 Oligocene, of Germany, 4724
 Palm patterns. (See *Dermatoglyphics*.)
Palmaeae (Monocot.), p.1864⁴. (See also *Palm(s)*.)
Palmae (Monocotyledones), p.1864⁴
Palmalea (Monocotyledones), p.1864⁴
Palmeria scandens, *Endocolum* on, 8407
Paloto (p.1871²), sp. descr., 1608
Palomena musina, ecology, 12580
Palpatores (Arachnida), p.1874²
Paludina (p.1872²), n. spp., 10565
Pamphilidae (Hymenoptera), p.1878²
Pamphilinae (Lepidoptera), p.1876²
Pan (p.1882²). (See also *Chimpanzee*.)
 material in American collections, catalogue, 2459
troglodytes, ascarids from, 15946
PANAGRELLUS (Nemathelminthes) (p.1870²) *pycnus*, from cottonwood, 17957
PANAGROBELUS (p.1870⁴), n. spp., 17958
Panargyrops (p.1878²), new species on hemlock sawfly, 18025
Panchax (p.1879³) *panchax*, use in mosquito control, Bengal, 12225
 Pancreas. (See also *Insulin*; and *trypsin* under *Enzymes*.)
 ablation. (See also *Diabetes, pancreatic*.)
 adrenalectomy and, carbohydrate metabolism after, dog, 12643
 arteriosclerosis in, dog, 12643
 conversion of protein to glucose after, dog, 9195
 diabetogenic action of ant. pituitary after, dog and toad, 3836, 3837
 effect on:
 diabetes insipidus, dogs, 7895
 lipid metabolism, duck, 9350
 liver, 7518
 oxidation of alcohol, dog, 16470
 glucose and sucrose tolerance after, dog, 12815
 hyperglycemic urinary principle and, dogs, 9637
 insulin as affecting sugar output after, 16813
 lipoprotein deficiency in, bromsulphalein liver function test as criterion, 3750
 metabolism of D- and L-xylulose after, 14537
 adenoma, with hyperinsulinism, 16871
 of islets, hyperinsulinism and, 16929
 hypoglycemia, obesity and, 14880
 ampulla, functional activity, 2090
 carbohydrate metabolism in, 2027
 carcinoma, of body and tail, clin. path., 14879
 study, 11280
 cells, entero-chromaffine, in amphibian, 4337
 nuclear size variations, *Mus*, 16987
 colloid in, histology, fish, 11411
 cystic fibrosis, vit. A absorption in, 16556
 disease, diagnosis by blood diastase test, 10915
 and heart disease, case, 14755
 ducts, function of musculature at duodenal end, 12643
 ligation, effect on blood and liver lipids, 12643
 enzymes, in avitaminosis B., 11347
 hydroxy acids and salts as affecting, 194
 extract, effect on cancer in tarred mice, 610
 heart block by, 5744
 insulin-free, pharm., 4145
 saponification rate with triglycerides, 16612
 fats in, localization, reptiles, 11423
 fat-necrosis, in fish, 2711
 fatty inclusions, amphibians, 9691
 feeding, effect on blood lipids during infection, 7386
 function, secretin test, 16563
 insulin in, diet and, 12643
 insulin and Zn in normal and diabetic, 359
 islets, cells, alpha, extract, effect on fat metabolism, 376
 beta, hyperglycemia, as affecting, 12750
 types, staining methods, 15045
 as influenced by:
 ant. pituitary extracts, 16639
 intraven. inj. of glucose, 16491
 pituitary extract, 5616
 islet tissue, in infants of diabetic mothers, 4286
 juice, duodenal ulcer and, dog, 7501
 nucleosidase and nucleotidase in, 12670
 lipase, bile acids as affecting, 12892
 hydoxycholeic acids as affecting, 13164
 specificity and action on blood neutral fat, 14456
 necrosis, acute, urinary diastase in, 9408
 papillae, drugs as affecting, rabbit, 13187
 observation, 13178
 role in protein metabolism, dog, 16624
 salts in, secretion and, 5591
 Pancreas (continued)
 secretion, blood flow and, 9344
 enzymes in, secretin as affecting, 3786
 external, in fasting chronic fistula dogs, 12643
 vagotomy as affecting, 12643
 as influenced by:
 HCl and intravenous saline, 16571
 muscle extract, 3851
 physostigmine and prostigmine during anesthesia, 14801
 splanchnic nerve stim., 16685
 vit. A, 3754
 synergism with thymus, 16630
 venous thrombosis, and carcinoma, 16880
 Pancreatitis, serum lipase in, 1953
Pandatus borealis, destruction of young prawn, 1874
Pandanaceae (Monocotyledones), p.1864²
Pandanalea (Monocotyledones), p.1864²
Pandanus (p.1864²), n. spp., 1116, 11868
 new localities, 1114, 1116
Pandellus (p.1862³), spp. transferred from *Panus*, 15462
Pandolus campanulatus var. *sphinctrinus*, the teonanacatl of the Aztecs, 13971
Panicum (p.1864²), n. spp., 1558
 anomalous inflorescences, 17514
 chromosome numbers, 1703
 Dochkloch on, 13732
 millaceum, biology, distr., and culture in Germany, 6484
 corn borer on, in Poland, 1494
 Panmyelophthisis, relation to acute myeloid leucemia, etiology, 2398
 Panniculitis, relapsing febrile nodular non-suppurative, case, 14875
Pannoparmelia (p.1862³), new species, 6364
 Panophthalmia. (See *Ophthalmia*.)
Panorpa (p.1876⁴) *communis*, gregarines in fat-body cells, 10524
 head region, anatomy, 2475
 thorax morph., 5147
Panscopus (p.1876³) *michebacheri*, 6886
Panthea (p.1877⁴) *coenobita*, comparison with *Lymantria monacha*, 10480
 distinction from nun moth, 14133
Pantheinae (Lepidoptera), p.1877¹
Pantholops (p.1883⁴) *hodgsoni*, in Thibet, 5223
 Pantocaine, effect on nasal mucosa, 13151
Pantolestidae (Mammalia), p.1882²
Pantomora (p.1876³), n. spp., 6882, 6883
Pantopoda, p.1874⁴
Pantorhytes (p.1876³) *plutus*, on cocoa, New Guinea, 8636, 14107
 PANTOSPOREA (Fungi) (p.1863³), 1074
 Pantothenic acid. (See also *Growth, accelerators*.)
 as bacterial growth factor, 6312, 6318
 effect on respiration, yeast, 14019
 histopath. of chicks deficient in, 16523
 in meats, 16529
 in rat nutrition, 16527
 relation to chick antidermatitis factor, 12843
 requirement of chick, 14560
 from yeast, 16522, 17722
Panulirus argus, heart, acetyl choline and adrenalin as affecting, 13004
interruptus muscles, innervation, 8063
 japonicus, sex dimorphism, 12327
Panus (p.1862³), n. sp., review, 15462
 Papain. (See under *Enzymes*.)
Papaipema (p.1877³) *englehardtii*, 10614
 Papaver. (See also *Poppy*.)
Papaveraceae (Dicotyledones), p.1865³
 morph. of gynoecium, 15521
Papaverales (Dicotyledones), p.1865³
 Papaverine, effect on:
 amphibian lymph hearts, 16735
 male genitalia, 16622, 16623
 peripheral vascular disease, 11186
 pharmacology, 13178
 spasmodic action, 4104
 Papaya. (See also *Carica papaya*.)
 yellow crinkle, new virosis, 14067
 Paper. (See also *Fibers (plant)*; *Wood*.)
 containers, for perishable foods, sanitary condition, 13652
 microorganisms injuring, 1033
 microorganisms transmitted by, 2680
 parchment, treatment with Na or Ca propionate, effect on keeping quality of butter, 17415
 pulp, plants useful for, sedges, 1194

- Paphia* (p.1872⁴) *bifurcata*, from British Columbia,1612
- Paphiodotum* (p.1865¹) *spicerianum*, color changes in stained material produced by nucleolus,10714
- Papillary pattern. (See *Dermatoglyphics*.)
- Papilloma, carcinogenic virus, effect on tarred rabbit skin,588
- on xanthema formation, rabbits,14905
- immunological reactions,861
- Shope, specific antibody absorption with virus-containing extracts,13420
- Papio*. (See also *Baboon*.)
- comatus*, feeding behavior,12447
- subilaeus*, exptl. trypanosomiasis in,1542
- Pappogeomys* (p.1882⁴), n. spp. and n. subspp.,7040
- Papular fever. (See *Pustular fever*.)
- Parabasal apparatus, in diagnosis of trypanosomes,8718
- Parabiosis, gonadotrophic secretion inhibited by anti-gonadotrophic sera,5631
- heteroplastic compatibility of transplants in *Amblystoma*,11451
- in rats, estrin as affecting,3794
- Parabolocetrus* (p.1875⁴), n. spp.,3846
- nigrafasciatus*,16038
- Paracaulope*, critical notes,3807
- fluviatilis*, host of *Coitocaeum*,17937
- Paracentrotus lividus*, enucleated eggs, fertilization and development, 767
- PARACHEIRIDIUM** (Arach.) (p.1874⁴)
- decarvii*,6865
- Paraclelandia* (p.1868³) *simplex*, nuclear reorganization without cell division in,3263
- Paracitius* (p.1877⁴), n. spp.,14256
- Paracoccidioides brasiliensis*, granuloma case due to,18621
- Paracoenogonimus* (p.1869⁴) *ovatus*, life cycle,10542
- Paracordyloporus* (p.1873³), n. sp.,8748
- PARACYNTHIA** (Prochor.) (p.1878⁴)
- distincta*,6946
- PARADELOCINUS** (Echin.) (p.1871²)
- (Cb),10555
- Paradichlorobenzene*, in control of tobacco blue mold,1455
- for weevil in sweet potato seed, effect on germination,14115
- Paradisogaster* (p.1869⁴) *chaetodontis*,6803
- Paradiseidae (Aves), p.1881⁴
- Paraffin. (See also *Embedding*; *Microscopical technique*; *Sectioning*.)
- bath, descr.,7324
- coated suspensions of tubercle bacilli, prep. and properties,9853
- Paraganglion. (See *Chromaffin tissue*.)
- Paragonimus* (p.1870³) *westernmani*, in *sesarma*,17941
- PARAGULUBIA** (Dicot.) (p.1864⁴), 10121
- Paragus* (p.1877⁴) *African* spp. keys, 6897
- Parahemimurus* (p.1869⁴), n. spp.,6803
- PARALAEURIS** (Nemath.) (p.1870²) *dorchila*, from *Conolophus*,8735
- PARALDEHYD*, central action,9393
- effect on heat formation in brain, 7760
- Paralichthyidae* (Pisces), p.1879⁴
- Paralichthys* (p.1879⁴) *lethostigmus*, blood cell morphology and blood coagulation time,5884
- Paralimnopadix* (p.1864⁴), n. spp. and n. subgenus,11864
- Parallactoskope*, use in depth perception studies,9471
- Paralysis, agitans, electromyograms and electroencephalograms,2417
- precipitation reactions,2418
- therapy, by belladonna and stramonium,8554, 8557
- traumatic, path.,7906
- bulbar infectious. (See *Pseudorabies*.)
- central, extract as affecting, rabbits,7903
- cerebrospinal fluids, gold sol types for Lange test,11665
- familial periodic, K as affecting, 7451
- fowl. (See *Neurolymphomatosis galinarum*.)
- in foxes, vit. B₁ deficiency causing,11737
- general, chemical pacemakers for alpha brain wave frequencies, 12643
- malaria therapy. (See *Malaria, therapeutic*.)
- post-malarial anemia, Cu and Fe therapy,5838
- spirochaetes in brain in,17314
- hemiplegia, coronary thrombosis and,13108
- infantile. (See *Poliomyelitis*.)
- Landry's ascending, histopath.,2410
- of lower extremities, associated with Weil's disease,18608
- mimic, of facial nerve, in cerebral tumors,16872
- paraplegia, equine, epidemic and etiological relations,11752
- rabie, in man,13575
- senile, vit. E and,13269
- toxic, in sheep and cattle,6120
- PARAMECIDAE** (Protozoa), p.1863³
- Paramecium* (p.1863³) *electrical stimulation with linearly increasing current*,10841
- as food for *Woodruffia*,6767
- regeneration capacity, racial variation in,11468
- aurelia*, change of mating type during vegetative reproduction,11105
- delayed change in phenotype following change in genotype, 1774
- endomixis, bacteria as affecting,12230
- mating types,3269
- bursaria*, conjugation, compatible types,3262
- mating types, distribution, mating behavior,7143
- caudatum* division rate, u.v. irradiation as affecting,9102
- rhythmicity of division rate,10519
- sexual differentiation in,10523
- multimicronucleatum*, conjugation related to food abundance,5099
- reproduction, in old culture medium, and starvation effects,5102
- sexual differentiation in,10523
- nephridiatum*,10522
- Parameciumochra* (p.1873³), n. spp. and keys,12331
- PARAMESOLEPTIS** (Pisces) (p.1879⁴),8813
- PARAMICIPSELLA** (Nemath.) (p.1870³)
- brevicaudata*, from *Athene*,10546
- Paramoera*, critical notes,3807
- Paramolgula* (p.1878⁴) *gigantea* f. *capax*,6946
- PARAMONTIUS** (Col.) (p.1876³) *squamulatus*,8769
- PARAMONORCHEIDES** (Platyh.)
- (p.1869⁴), n. spp.,6803
- Paramphistomidae* (Platyhelminthes), p.1870¹
- Paramphistomum cervi*, liver lesions, ruminants and swine,12260
- PARANENIA** (Moll.) (p.1872³), new subg. of *Nenia*,10566
- Paraplanes* (p.1873⁴), n. spp.,6829
- PARAPLASOCINUS** (Echin.) (p.1871²)
- (Cb),10555
- Paraplegia. (See under *Paralysis*.)
- Paraplesius* (p.1876¹) *ugandanus*, on tea,6882
- PARAPRIONOSAURUS** (Rept.) (p.1880³), *wyomingensis* (E),3404
- Parapristipoma trilineatum*, new crustacean parasite,16020
- Parasclops* (p.1882¹) *breweri*, biology,5222, 12446, 18098
- Parascaris equorum*, in left ventricle, horse, affecting,1566
- Parasetigena* (p.1878³) *segregata*, as parasite of *Asotus*,10452
- Parasilurus asotus*, color changes,3993
- melanophores, hypophysectomy as affecting,14656
- Parasilusa* (p.1876¹), n. sp.,6867
- Parasite(s)**. (See also *Helminths*; *Insects*; *Parasitism*; *Plant diseases*.)
- animal,4655
- lab. manual,10498
- in biological control of sawfly, Ontario,10432
- of birds and mammals, Alaska,1564
- in blood, wild mammals,17901
- of *Centrarchidae*, Florida,15948
- chemotherapy, book,9917
- ciliate, on eucterian *Thecacina*, 10530
- of colon, heat therapy,3240
- of domestic animals, Puerto Rico, check list,17919
- ecto-, on sheep, Sweden,5091
- on varying hare, Alaska,1564
- exolution,8899
- gastro-intestinal, of ruminants, control,15947
- of hares, survey in Alaska,4681
- helminth, control in calves, Philippines,1562
- effect on disease resistance, Nigeria,8690
- of horses, Hawaii,17897
- goblet cells of chick as affecting,6127
- internal, effect on muscle fibers of *Cottus*,11428
- of fur bearers,6755
- intestinal, diagnosis, efficiency,17895
- examination of stools for,9998
- effect on erythrocyte sedimentation rate,1540, 14192
- incidence and distr., Cuba,14192
- of medical students, New Orleans,1570
- survey, Indiana,14176
- Santiago, Cuba,6748
- of liver, ruminants and swine,12260
- of livestock, wild animals as carriers,8321
- of man, interm. hosts, chap.,14164
- of man and animals, Hawaii,17118
- protozoan, Havana,6741
- of sheep, control, Sweden,5091
- symbiotic, of bacteria,6317
- PARASITIDAE** (Arachnida), p.1874³
- Parasitism**. (See also *Commensalism*; *Parasites*; *Parasitology*; *Plant diseases*; *Symbiosis*.)
- accidental, myriapod in intestine, 6729
- Davaineidae* in man,14192
- effect on wt. of host,1556
- evolution,3899
- in fish, effects,8637
- host-parasite relations, in chronic infections,17326
- collodion sac for study,17299
- of copepod (*Sphyrion*) on redfish,16019
- in ducks,1591
- of *Graphidium* (Nematode),10548
- Strongyloides* reproduction in rat,15959
- of viruses,35
- hyper, *Tetrastichus* and *Pleurotropis* on *Schizonotus*,10447
- in lambs, nutrition as affecting,6728
- of man and other mammals, by ingested dipteran larvae,1515
- multiple, insect,10456
- role of osmotic pressure gradients in,15862
- sex ratio, host as affecting, hymenoptera,8668
- of *Usnea barbata*,17487
- Parasitology**. (See also *Parasite*; *Parasitism*.)
- of acute diarrheal diseases,17914
- animal, lab. manual,10498
- clinical, book,3238
- diagnosis of protozoa and helminths,17895
- efficiency,1571
- discussion,6750
- importance, Italy,14164
- manual,9902
- medical, book,14192
- Pan American Congress,3366
- Parasphenia* (p.1875¹), n. sp.,17987
- Parastacidae* (Crustacea), p.1874²
- Parastacoides* (p.1874²), n. spp. from Tasmania,17987
- Parastasia* spp. (p.1876²), on cocoa pods, New Guinea,14107
- Parastemon* (p.1865⁴) *urophyllum*, distrib. and wood properties,10272
- Parastenocaris* (p.1873³), n. spp.,6836
-6840
- Parasympathetic nervous system**. (See *Nervous system, autonomic and parasympathetic*.)
- Parasynapsis**. (See *Chromosome*; *Meiosis*.)
- Paratetranychus citri*, control of, on citrus,14106
- pilosus* (Acaridae), on apple, control,10375
- control of, coal tar oil,12180
- life history and habits, control,15896
- Paratettix texanus*, selective forces in wild populations,16196
- Parathalestria* (p.1873²), n. sp.,6835
- Paratheresia*, establishment in Louisiana, exp.,1524
- Parathormone*. (See under *Parathyroid gland*.)
- Parathyroid gland**, ablation, effect on: blood pH,9156
- growth, rat,3908
- mineral appetite, rat,14549
- adenoma, hyperfunction due to,586
- relation to hyperfunction and renal calcification,7836
- effect on: body temp.,3789
- mineral metabolism,9287
- in etiology of osteomalacia with psychosis,2411
- extract, assay from Ca serum, dog,12643
- by urine Ca method, rat,14647

- bid gland (continued)
 (continued)
 acetate and, in trichinosis therapy, 3713
 effect on:
 arterial tone, 13118
 blood and urine, 9339
 Ca, Mg, and P metabolism, dog, 3798
 diffusion of Ca, Mg and P into peritoneum, 9075
 permeability of lens capsule to Ca, 9076
 phosphatase action, 9360
 in treatment of bone fractures, pigeon, 12863
 histology, 4339
 hyperfunction, demineralization of bones, relation to rickets, 13272
 effect on kidneys, 9629
 produced by diet, rabbit, 7535
 renal disease and, 14667
 renal insufficiency and, dogs, 5857
 hypofunction, clin-path., 14957
 structure in Barasingha deer, hist., 16985
 hist., 16984
 tetany, idiopathic, vit. D and parathormone and, 9636
Paratrechina (p.1878⁴) *longicornis*, distr. by ships, 16250
PARATRIGONA (Hym.) (p.1878⁴), subgenus of *Trigona*, 6928
Paratiroa (p.1875⁴) *cockerelli*, breeding areas of, 10415
 development, temp. as affecting, 8984
 in Oklahoma, 1630
 on potato and tomato, Tex., 14117
 on potatoes, var. differences in tolerance, 4987
Paratuberculosis, of cattle. (See *John's disease*.)
 of sheep, 6229
Paratylenchus (p.1870⁴) *pratensis*, biol. forms in, 17958
Paratyphoid-enteritis group of bacteria, classification, 8240
Paratyphoid fever. (See also *Enteric fevers*.)
 -B, dysentery and, epidemiology and differentiation, Amsterdam, 6196
 in chicks, *Salmonella* types from, 6239
 epidemic, paratyphoid bacillus-B causing, 10007
 from water supply, 2673
 epidemiology, 17871
 epizootic in mouse colony, 17179
 fowl, serodiagnosis by egg-yolk agglutination, 2803
 immunizing action of glucido-lipidic antigens of *Salmonella* vs. *Shigella* strains, 803
 infection from dog, 11696
 inhibition by minimal amts. of heterobacteria, 9877
 latent exp., 13606
 normal agglutinins for, in population of Victoria, 886
 of pig, histopath., morbid anatomy, and etiol., 2705
 rats spreading in animals, 2709
 serodiagnosis, agglutination specificity and non-specificity, 799
 by Gruber-Widal reaction, technic, 798
 Widal reaction for, statistics, 13448
 sources of infection in man, 2709
Paratyphoid group of bacteria. (See also *Salmonella* spp.)
 "Ratin" types, fermentation reactions, 8282
 variability in vivo, 13709
Paratyphoid-typhoid-enteritis group of bacteria, diagnosis by Hohn-Herrmann method, 17341
 differential media, 8275
 for types and serological phases, 8263
Paratyphoid-typhoid group of bacteria. (See *Typhoid-paratyphoid* group of bacteria.)
Paravacuolar bodies. (See *Cytoplasm*, components.)
Parazoanthus (p.1869⁴) *asinellae*, canal system, anatomy, 9787
Pardosa (p.1874⁴) *sternalis*, gynandromorphism, 3317
Parechinus microtuberculatus, enucleated eggs, fertilization and development, 767
Parechthodryinus (p.1878⁴) *clavicornis*, parasite of *Laccifer*, India, 14102
Paredrine, effect on:
 heart, 14839
 heart-lung prep., 2292
 iris muscle, 4045, 11216
Paredrinol, effect on blood pressure, man, 13181
Parent-offspring relationship. (See also *Fetus*; *Infants*; *Newborn*; *Placenta*; *Pregnancy*; etc.)
 alcoholism as affecting offspring, man, rôle in infantile rickets, 5351
 anthropometric characters and, 7817
 arginase in liver of suckling rats, As and Pb in diet of mother as affecting, 3558
 blood O₂ of mother and fetus, during birth, sheep, 3615
 cat, 429
 dissociation curve, cattle, 7378
 blood in placenta and fetus, sheep, 7576
 blood sugar and ketones in mother and newborn, sheep, 5511
 changes in skeleton musculature of paralyzed sucklings of vit. E lack mothers, 13313
 congenital malaria, India, 6745
 Cu and Fe in fetal and maternal blood, 426
 correlation of placenta wt. with wt. of baby, 11098
 cystine and lysine deficiency in mother, effect on fetus, 14530
 detn. by blood groups, 17230
 book, 13520
 D₂O adm. to mother, effect on young, mice, 5548
 endocrine glands in children of diabetic mothers, 4286
 erythrocytes in fetus and young, gastric juice adm. to mother as affecting, rat, 9619, 12643
 stomach extract as affecting, rat, 3961
 estrogen adm. to mother, effect on sex of embryo, rat, 12643
 intersexes produced by, mice, 13043
 father-child physical resemblance, inheritance, 8015, 8019
 fetal resistance in tumor high-fertility low and tumor low-fertility high rats, 16657
 hormone I in mother's and umbilical cord blood, 9423
 lesions of fetuses after treatment of mother with gonadotropic hormones, rat, 2154
 liver extract as affecting blood picture in mother and newborn, rat, 10891
 maternal age vs. mongolism, 413
 muscle creatine in young of mothers on low vit. E diet, 11159
 permeability of placenta to paminophenylsulfamide, 13538
 to antigens and antibodies, 8146
 to phytotoxin, guinea pig, 9414
 protective protease reaction in parents and offspring, 5444
 survival of litters from adrenalectomized and treated rat, 13049
 of offspring, age of father as affecting, man, 16666
 transfer of As and Pb from mother to fetus, 3702
 of immunity, to bacteria and toxins, in dogs, 9906
 in rabbits, 9907
 to Chagas' disease, 15177
 in newborn, mechanism, 6098
 sheep, 9905
 of reagin through placenta, monkey, 11095
 of sulfanilamide from mother to fetus, man, 427
 of *Trypanosoma*, resistance from mother to fetus, rats, 9909
 vit. B₁ and Mn lack and excess as affecting successive generations, rats, 12847
 vit. C in maternal and fetal bloods, 419, 421
 vit. E deficiency in mother, effect on young, rat, 1026
 vit. K ingestion by mother, effect on blood prothrombin in infant, man, 14681
Paresis. (See *Paralysis*.)
Pareugenia (p.1866⁴), n. sp., 6431
Pareuzoetus (p.1879⁴) *brachypterus*, littoralis, 3374
Pareuzoglossum (p.1879⁴) *laurae*, nesting habits, 18047
Paridae (Aves), p.1881⁴
Parietales (Dicotyledones), p.1866²
Parinari laurina, source of kusta nut, 4870
Paris green. (See *Arsenicals*.)
Paris (p.1865⁴) *hexaphylla*, chromosomes, number, form and behavior, 7095
 quadrifolia, cytological studies on natural populations, 5287
Park(s). (See also *Conservation*.)
 measurement of evaporation rate and light penetration in, 10763
Park, Wm. Hallock, biography, 12783
Parker, Wilfred H., biography, 16143
Parkia speciosa, djenkolic acid in seed of, 3052
Parkinson's disease. (See *Paralysis agitans*.)
Parmelia (p.1862¹), tax., 6364, 8411
 ecology, 8415, 15473, 17503
 stygia var. *septentrionalis*, 3504
Parmeliaceae (Fungi), p.1862¹
Parosan, cerebro-spinal fluid, trypanocidal after, 2304
Parozyma (p.1877⁴) *misella*, injury to chrysanthemums, control, Gr. Britain, 12193
Parrakeet, olfactory formations, 9676
Parrella (p.1880³), n. spp., 10623
PARRINGTONIA (p.1880⁴) *gracilis*, generic relationships, 10634
Parrot(s). (See also *Psittaciformes*.)
 longevity, 8326
 psittacosis, latent, complement fixation test with tissue-culture antigens, 13458
 outbreak in attendants, 8310
Parsonia (p.1866⁴), n. sp., 13768
PARTEMONA (Hym.) (p.1878⁴), subgenus replacing *Palera*, 12389
Parthenocarp, artificial, by use of auxin, 1360
 in fruit trees, 11974
 plant hormones as affecting, 10300
 relation to sex, Angiosperms, 10301, 13990
 in tomatoes, heteroauxin as affecting, 15708
Parthenogenesis. (See also *Apogamy*; *Egg activation*; *Fertilization*; *Parthenocarp*; *Pseudogamy*.)
 in algae, 8375, 13725
 cytol. differentiation of sex organs in plants having, 13445
 diploid, *Crepis*, 14365
 induced in human ovum, 9427
 in pteridophytes, review, 17561
 in vertebrates, mechanism, 17044
Parthenopidae (Crustacea), p.1874⁴
Partridge(s). (See also *Perdix*.)
 chukar, *Hezamiia* from, 15964
 embryo position vs. mortality, 784
Parturition, blood cholesterollase activity during, 9424
 blood sugar and ketones of ewes and new-born lambs after, 5511
 effect on growth of mammary carcinoma, mice, 583
 effects of barbiturates during, 2169
 estrogens in blood and urine in, 2171
 inhibition by estrogen, rabbit, 9316
 ketone-bodies in blood during, 9432
 premature labor, induction, 12643
 sex hormones as affecting, man, 3971
 urine, effect on uterine motility, rabbit, 9658
 uterine motility control, rabbit, 12643
Parus (p.1881⁴), bird banding, 14296
Parvobacteriaceae (Bacteria), p.1861¹
Paspalum (p.1864³), ergot, reaction of different spp. to, 10345
 urvellei, preferred food of *Anacetrinus*, 5037
 vaginatum, note, 15489
Passalurus (p.1870³), n. sp., 14214
 nonannulatus, from varying hare, 1564
Passer (p.1882³). (See also *Sparrow*.)
 n. subsp. in Tibet, 5845
 domesticus, cestode parasites of, 1593
 light and gonadotropic hormones as affecting, 425
 nesting data, 8839
 Plasmodium from, 3257
 spermatogenesis, 10723
 montanus, male destroying eggs, 7009
Passerculus (p.1882⁴), food habits, 9064
 nomenclature of spp., 16072
Passerella iliaca fuliginosa, from California, 5207
Passeriformes (Aves), p.1881⁴
Passiflora incarnata, chemical compounds found in, 6545
Pasteur Institute, expansion, 4593
Pasteurella (p.1861¹), association in verminous pneumonia of Rocky Mountain bighorn sheep, 4678
 in chronic purulent bronchitis, 4618

SUBJECT INDEX

Pasteurella-Pectin

- Pasteurella* (continued)
- dissociation in,6315
 - glucido-lipidic antigens of *Salmonella* vs. *Eberthella* vs.,893
 - hemorrhagic-septicemia strains compared,6315
 - human infections,4618
 - influenza-like, sinusitis of cats and,2646
 - mastitis in cows due to,2700
 - new form from traumatic meningitis,18605
 - pathogenicity vs. immunity relations vs. origin,6222
 - strains from various animals compared,6222
 - avicida*. (See also *Pasteurella aviseptica*; *Fowl-cholera*.)
 - bacterin, prep. and value,6121
 - carrier detection and control, stained-antigen rapid whole-blood test for,6252
 - immunizing power, LiCl medium as affecting,13461
 - sulfanilamide action on infections by,11579
 - aviseptica*, glucido-lipidic antigens of S vs. R strains,892, 893
 - bovis septica*, in bovine hemorrhagic septicemia, significance,6248
 - crow infected by,6248
 - cuniculicida*. (See *Pasteurella leptoseptica*.)
 - hemolytica*, hemolytic atypical hemorrhagic septicemia strains grouped under,6315
 - leptoseptica*, resistance to, clasmatoocyte rôle,17216
 - multocida* n. comb., for non-hemolytic hemorrhagic-septicemia strains,6315
 - pestis*. (See also *Bacillus p.*)
 - absence in fleas and wild rodents in Canada,11689
 - inhibition of exp. paratyphoid by minimal amounts,9877
 - transmission by fleas,8290
 - pseudotuberculosis*. (See *Bacillus pseudotuberculosis rodentium*.)
 - tularensis*. (See also *Tularemia*.)
 - blood culture,17352
 - Rocky Mountain wood ticks as vectors,11689
 - Pasteurellosis*, of pigs,6222
 - Pasteurization*, of apple juice,2730
 - Brucella abortus* killed by,6285
 - of cider by flash method,1032
 - of fruit juices,1020
 - of ice cream mix, efficiency tests, 17417
 - of milk, compulsory,4420
 - effect on tubercle bacillus,8338
 - on vit. C,416
 - peroxidase as affecting,6275
 - phosphatase test of efficiency,8079
 -11777, 11783, 13681
 -13683, 13684
 - Scharer rapid field test for,8341
 - Pasture. (See also *Forage plants*; *Grass*; *Grassland*; *Grazing*; *Meadow*; etc.)
 - ammonium SO₄ as affecting, 4853, 4854
 - analysis, percentage area detns.,132
 - blue stem yield, clipping as affecting, quadrat study,12601
 - clovers for, Vermont,4839
 - composition and forage value, fertilizer and pH as affecting,4840
 - helminth viability on,12244
 - hog, control of lungworm larvae on,17915
 - improvement and fertilizers for, Ohio,2932
 - land, conservation, book,14317
 - management,11942
 - central and southern Great Plains,6483
 - Colorado,15559
 - for dairy cattle, S. D.,1195
 - effect on white clover,10180
 - in England, rôle of red clover in,15541
 - and fertilizers for, Great Britain,17573
 - Internat. Congress,6493
 - Kenya,10189
 - and relation to land use, Great Britain,4847
 - S. Africa,15546
 - Tenn.,1193
 - permanent, improvement and management, southern U. S. A.,2962
 - plants, of Wyoming, P and Ca content,15096
 - rate of stocking of beef cattle on, 15099
 - strongyloid larvae on, longevity and control,15973
 - tapeworm eggs on, variation,1569
 - Patch tests, "continuous," device for,15157
 - in eczema check-up examinations,17177
 - for eczematous hypersensitivity, substances and concentrations used in,13474
 - in occupational dermatitis,17144
 - tuberculin, evaluation,17358
 - window, applications,17145
 - Patellar reflex. (See *Reflex, patellar*.)
 - PATERA* (Hym.) (p.1873⁴), subg. of *Trigona*,6928
 - Paternity. (See *Parent-offspring relationship*.)
 - Pathergy, as cause of scleroderma,630
 - Pathology, of amebiasis,15945
 - anatomical, of domestic animals, book,8318
 - causes and prevention, textbook, 15325
 - clinical diagnosis, laboratory index for,17359
 - by laboratory methods, manual,17357
 - of high altitude climates,16240
 - host-parasite relations, collodion sac for study,17299
 - neuro, classification,7912
 - plant. (See *Plant diseases*.)
 - recent advances, book,567
 - textbooks,566, 9972
 - Patiria* (p.1871⁴) *minuta*, water vascular system,10551
 - Pattalus* (p.1872⁴), re-established,3294
 - Paullinia* (p.1866⁴), n. sp.,6437
 - Paupoda*, antennal musculature,10577
 - Pea*(s). (See also *Pisum*.)
 - aphid on, control,17879
 - canning, aphids on, control,12202
 - Ca/P ratio in skin, changes during ripening,10218
 - culture, diseases, and pests, Wisconsin,15535
 - cow. (See *Coupea*.)
 - frozen, vit. C in,2079
 - grafting, factors affecting,15729
 - growth of embryos, vit. B₁ and nicotinic acid as affecting,4926
 - hybridization, to produce new vars.,12524
 - insect pests, *Cydia*, Canada,10405
 - leaf spot (*Septoria pisi*), var. susceptibility tests,3169
 - marsh spot, control by Mn treatment,3156
 - Mn deficiency causing, 3169, 14070
 - Mn treatments ineffective,15873
 - mosaic, correlated with aphid population, control,17869
 - nematode stem disease,17773
 - root formation, heteroauxin as affecting,3059
 - seed disinfection, effect on germination and yield,8626
 - seed viability and germination, electro-dialysis as affecting,17674
 - Sinikka, origin and value,13830
 - soil sickness, fertilizers as affecting,1472
 - virus diseases (new),3169
 - virus 1, properties and transmission,3128
 - wilt (*Fusarium* spp.), resistance, 17825
 - Pea aphid. (See *Illinoia pisi*.)
 - Peach(es). (See also *Prunus*.)
 - brown rot, control of transit and storage phases,10353
 - bud differentiation, pruning and shading as affecting,1255
 - canker, fungi associated with,3169
 - chlorosis, rôle of Mg in,15836, 15837
 - disease survey in Kansas,16025
 - hardiness of twigs, N and P content related to,14027
 - hardy rootstocks for, length,13864
 - hybrid, characters,11982A
 - insecticide injury, prevention by MgO,10394
 - mildew, control, in Egypt,3149
 - morph. differentiation from rose mildew,6687
 - mineral requirements,2986
 - mosaic (virus), history in California,17793
 - host relationships,3121
 - phony disease (virus), inactivation of virus by heat,3169
 - localization in woody cylinder, 3169
 - polyploidy and pollen grain size, 1742
 - root growth and distr. in sandy loam soils,13873
 - seedless, caused by cold injury,1242
 - spraying from airplanes,17330
 - trials,3169
 - technic and recent results of breeding,5314
 - tree, N nutrition,17640, 17641
 - P and K as affecting, southeast U. S. A.,15607
 - virus diseases, yellows and little peach,10390
 - yellow-red virosis, dist. and history in Connecticut,12139
 - dist. in U. S. A.,15889
 - yellows (virus), in Tennessee,15889
 - Peach borer (*Conopia*), control,6695
 - Peach leafhopper, distr. and life history,10390
 - Peach moth. (See *Laspeyresia molesta*.)
 - Peanut(s), black spot (*Cercospora personata*), in Philippine Is.,6633
 - spraying for,3169
 - fertilizer for, N. Carolina,15533
 - fungi on seed stock,15799
 - hemicellulose from shells, extraction,11958
 - leafspot (*Mycosphaerella* spp.), control,17835
 - Pear(s), As spray residue on, factors affecting amt.,3179
 - blight. (See *Erwinia amylovora*.)
 - control, Calif.,10393
 - breeding, Great Britain,1268
 - bud mutations in Portuguese vars.,14361
 - for cider, production in France,1273
 - crown gall, control,10354
 - flower- and leaf-bud development, winter oil sprays as affecting,3173
 - fruit, growth and development, pollen source as affecting,6526
 - injury by hail,17796
 - setting, factors affecting,6523
 - hardy stocks for, Poland,3014
 - leaf blister mite. (See also *Eriophyes pyri*.)
 - respiration and emanation of volatile materials, ripening and storage as affecting,15758
 - Seckel, history,6525
 - self-sterility,15596
 - stony pit (virus), descr.,6654
 - new virus disease,3169
 - storage and handling,6513
 - tree, grafting, interrelations of stock and scion,2994
 - Pearls, review of "coconut,"6826
 - Peat. (See also *Bogs*; *Pollen, analysis*; *Soil, peat*; *Sphagnum*.)
 - effect on nutrient value of manure,15544
 - flows, rôle in bog development,1841
 - land, improvement for wildlife and related uses,7242
 - Pebrine. (See *Silkworm*; *Nosema bombycis*.)
 - Pecan(s), culture, Florida,1230
 - fertilizers for, value of annual applications,1229
 - fruit development in prefilling period,11993
 - grafting, rootstock and scion trials,15609
 - insect pests, Florida,3175
 - pruning vs. thinning the stand,13909
 - rooting of trees, indole-3-butyric acid as affecting,13987
 - rootrot (*Phymatotrichum*), control,1482, 17842
 - effect on intercrop selection,17841
 - histology,17811
 - scab (*Cladosporium effusum*), control,1457, 3145
 - soils and fertilizers for, southern U. S. A.,3004
 - spray for scale insects as affecting,5020
 - treating cuttings with hormones, method,12073
 - Peccary, as carrier of *Capillaria ova* to man,8691
 - Neogene, from N. America,5217
 - Pecten, muscle, autolysis, precursor of octopine in,4046
 - Pectin, in apples, as source of uronic acid,6517
 - bactericidal action of Ni-containing,2671
 - effect on:
 - avitaminosis A, rats,11340
 - bacterial growth,4663
 - bleeding time, rabbits,11329
 - cell adhesions and softening of tissues, potato,15793
 - hemicellulose extraction from plant materials,11958
 - in *Kalmia polifolia*,6544

- Pectin (*continued*)
 -methoxylase, of tomato, heat inactivation, 10048
 in peaches, changes during ripening, 17628
 in pine needles, changes during aging, 17738
 preparations, effect on hemostasis, rabbit, 14804
 setting power, sulphurous acid as affecting, 10227
 Pectinidae (Mollusca), p.1872³
PECTINOPHELIA (Annel.) (p.1871³), 1608
Pectinophora (p.1877³) *gossypiella*. (See also *Platyedra gossypiella*.)
 on cotton (cultivated and wild), inspection + control, 5022
 predators and parasites of, Sao Paulo, 12231
Pediculati (Pisces), p.1880⁴
Pediculoides (p.1874³) *ventricosus*, assoc. with harvest dermatitis, control, Bulgaria, 10445
 cause of human acariasis, 1513
Pediculus, history of knowledge of human infestation, 1520
PEDIOLAGUS (p.1882³) *progressus*, (N), 14311
Pedipalpi (Arachnida), p.1874²
 Pedology. (See *Soil*.)
Pegusa (p.1879⁴) *lascaris*, sensory papillae, 3391
Pelage. (See *Hair*.)
Pelagoneurtes (p.1870⁴) *moseleyi*, notes, 8738
Pelagopiana (p.1869³), syn. of *Gnesioceros*, 10540
Pelargonium. (See also *Geranium* (not the genus).)
 flaked flowers due to unstable genes, 74
Pelea (p.1866³), n. sp., 4783
Pelecanidae (Aves), p.1881¹
Pelecaniformes (Aves), p.1881¹
Pelecanus (p.1881¹). (See also *Pelican*.)
erythrorhynchus, in California, 5207
occidentalis, pneumatic system, 5196
Pelecyopoda (Mollusca), p.1872³
Pelicanus, pneumatic system, 5196
 White, in California, 5207
Pellagra. (See also *Blacktongue*; *Vitamin B*.)
 adrenalin and grape sugar, effect on blood sugar, 14946
 blood P changes in, 11325
 blood V factor in, nicotinic acid as affecting, 7853
 in cattle, 11735
 cozymase in blood, 5841
 dermatitis, adermis HCl as affecting, 16924
 discussion, 7403
 endogenous, relation to stomach disease, 4259
 exptl., gastropyloric, nicotinic acid as affecting, swine, 4260
 insulin hypersensitivity, etiology, 14945
 like rations, effect on prothrombin clotting time, chicks, 12757
 like symptoms due to cyanides in diet, 13145
 liver in, hematopoietic vs. antiellagic factors, 11348
 nicotinic acid in urine, 3953
 -producing diet, effect on herbivora, 9232
 with retrobulbar neuritis, in Nigeria, diet and, 13270
 subsequent to beriberi, therapy with vit. B complex, 13268
 therapy, 11850
 with nicotinic acid, 322, 4262
 4265, 11345, 13278
 14940, 14950, 14920
 with nicotinic acid amide, 5844
 16919
 urinary pigment in, 13028
 in alcoholic, 2152
 from vit. B, used in therapy of beriberi, 14943
Pelleginia (p.1866³), n. sp., 15507
Pellia (p.1863³) *epiphylla*, morph. and anat., 6370
Pelmatohydra (p.1869³) *oligactis*, hatching eggs of, 6779
Pelmatozoa (Echinodermata), p.1871¹
Pelobates (p.1880³), coxycal lymph hearts, innervation, 15014
Pelobatidae (Amphibia), p.1890³
Pelomedusidae (Reptilia), p.1880⁴
Pelonomus multinotatus, note, 6378
Pelt(s). (See *Fur*; *Hides*.)
Pelteobagrus (p.1879³) *fulvidraco*, *Phyllodactylum* in, 1595
Peltigeraceae (Fungi), p.1862³
 Pelvis, human, ontogenetic form alterations in, 2452
 leiomyofibromatosis, 16853
 measurement of Indian, 4372
 tumors, retroperitoneal, of sympathetic nervous system, 2375
Pemphres affinis, parasite of, 14266, 14269
Pemphigus. (See under *Dermatosis*.)
Pemphigus, on poinsettia roots, control, 5042
 Penaeidae (Crustacea), p.1874²
Penaeus (p.1874²) *plebejus*, breeding habits and life history, 12631
 Penetrometer, multiple-needle type, firmness of canned fish determined by, 6259
 Penguin(s). (See *Sphenisciformes*.)
 Penicilliosis, arsenical wallpaper poisoning vs., 13622
Penicillium (p.1863³). (See also *Molds*.)
 n. spp., 6338, 11828, 17407
 acid formation by, iodoacetate and fluoride as affecting, 11766
 antagonism to *Pythium debaryanum*, 4997
 chemicals toxic to spores, temp. as affecting, 12110
 decomposition of aldehyde by, as factor in wheat rootrot, 12144
 effect on bacteriophages of *Rhizobium*, 17427
 in fermentation of cigar-leaf tobacco, 1030
 in Roquefort-type cheese ripening, 1039
 rot of "pineapple" oranges, 15866
digitatum, on oranges, storage conditions as affecting, 10232
 synergism with *Oospora* in citrus fruit rot, 17747
glaucum, immunizing power against bacteria, 8624
 nucleic acid from, composition and yield, 12113
griseofulvum, griseofulvin formed by isolation and structure, 8596
luteum, luteose formed by, kinetics, 8594
purpureogenum, hydrolysis of soybean meal by, 17751
ozalicum, injury to corn seedlings, soil factors affecting, 6667
phoeniceum, extraction of red pigment from, 3090
waksmani, tolerance to Cu, 1408
Peniophora (p.1862³), n. sp., 17492
 descriptive notes, 2812
 Penis, amoebiasis, 10509
 cancer, and bronchial cancer, in tar worker, 16870
 congenital absence in child, 15089
 glomus tumors, path., 14883
 growth, local application of testosterone as affecting, 382
 Pennales (Algae), p.1860³
Pennella (p.1873³) *filosa*, parasite of swordfish, 6795
Pennellidae (Crustacea), p.1873³
Pennisetum (p.1864³), anomalous inflorescences, 17514
purpureum, *Helminthosporium ocellum* on, 1431
spicatum, biology, distr., and culture in Germany, 6484
Penstemon (p.1867³), spp. notes, 2877
 6410
 Pentachlorophenol, toxic effects, rabbits, 11361
Pentacta contorta, wood rot of, in Philip-pines, 17851
Pentalonia nigronervosa, as vector of abaca mosaic, 6645
Pentamera (p.1872³), n. sp., 8294
 Pentamethylentetrazol. (See *Cardiazol*.)
Pentatomidae (Hemiptera), p.1875³
Penthea (p.1876³), n. sp., 10595
Pentheochaetes (p.1876³), n. spp., 5133
Penthestes septentrionalis septentrionalis, *Trypanosoma* from, 3257
 Pentnucleotides. (See under *Nucleotides*.)
 Pentobarbital, in anesthesia of lower animals, review, 1019
 as anesthetic for pigs, 11757
 effect on:
 blood gases in spinal anesthesia, 254
 blood plasma vol., 9148
 cerebral cortical and hypothalamic electrical activity, 12643
 neurogenic fever, 13076
 response to cold, dog, 12643
 vasomotor reversal by ergot alkaloids, 7769
 picrotoxin antagonistic to, 534
 toxicity, 11253
 Pentocaine, effect on sensitivity of muscle fiber, 14752
 Pentosan(s). (See *Gums*; specific pentosans, e.g., *Xylan*.)
 Pentose(s). (See also specific pentoses, e.g., *Xylose*.)
 detn., 1929, 16360
 Pentothal, in anesthesia of lower animals, review, 1019
Pentstemon, selenium-tolerant spp., 10179
 Pentstemon, root systems, 9080
 Peony(ies). (See also *Paeonia*.)
 Japanese, flower structure and vars. for Illinois, 10233
Peperomia (p.1865³), n. spp., 2827A
 2828A, 2865, 6429, 6437
 Pepper (black or white). (See also *Piper*.)
 active principles, 14441
 green, red, sweet, etc. (See also *Capsicum*.)
Verticillium wilt, 10349
 Peppermint. (See *Mentha*.)
 Peptide, in marine algae, 6606
 serological specificity, 11543
 Peptone(s), amino N in, detn., 16358
 creatinine production by bacteria from, 6305
 desensitization to, 13178
 effect on:
 bacterial resistance to disinfectants, 998
 blood coagulation, 3617
 bronchi, 2250
 coagulation of perivisceral fluid of *Arbacia*, 247
 liver cells, cytology, 2448
 sulphydryl adsorption, 11593
 tetanus toxin, 8143
 gelatin, anaphylactic responses to, 9875
 -poisoning, anaphylaxis pathology and mechanism compared, 17182
 shock. (See under *Shock*.)
 Peracarida (Crustacea), p.1873⁴
Perameles masuta, spermatorrhea in, 7578
Peranema trichophorum light sensitivity, salts, pH, gelation and, 12653
Perca (p.1880³). (See also *Perch*.)
 biology, 10814
flavescens, oxygen threshold, 5411
 sex ratio, 3393
 shelters in Michigan lakes, 9060
 Perceine, detoxification in organism, 4130
 Perception. (See *Sensation*.)
 Perch. (See also *Perca*.)
 yellow, elimination from lake by derris root, 12619
 Percidae (Pisces), p.1880³
 Percormorphi (Pisces), p.1879⁴
Perdix (p.1881³). (See also *Partridge*.)
perdix, food habits, 164
Peregrinator (p.1875³) *biannulipes*, predator of *Dinoderus*, Porto Rico, 10453
Perezia (p.1867⁴), n. spp., 15500
Perforaria (p.1862³), in Alaska, 6363
 Perfusion, fluid. (See *Salt, solutions*.)
 sterile and automatic, apparatus for, 3608
 Periangiosis, hemophagic cerebrospinal demyelinating, path., 16948
 Perianth. (See *Flower*.)
Periballia (p.1864³), anomalous inflorescences, 17514
 Pericarditis, adhesive, use of electrocardiogram for diagnosis, 482
 chronic constrictive, circulation and, 7730
 electrocardiography, 16725
 mortality by age groups, statistics, 13640
 relation to vit. B, 7724
 Pericardium, talc as affecting, 5790
 tumors, metastatic, incidence, 13230
Pericrypta (p.1874⁴), tax., 3371, 14277
 Periderm. (See also *Cork*; *Phelloderm*.)
 Peridiniidae (Protozoa), p.1868¹
 structure and reproduction, 8715
Peridinium, flagellum structure in, 1586
 cinctum, structure, reproduction, and nutrition in, 8715
Perileptus (p.1876³) *larval*, 8770
PERIMESTOCERINUS (Echin.) (p.1871³) (Cb), 10555
PERIMESTES † (Algae) (p.1860³) *horrida*, (J) 17481
 Periodicals, new, *Agronomia Lusitana*, 14333
Anais da Faculdade de Medicina de Porto Alegre, 12489
Borbasia, 10706
Bulletin of Animal Behavior, 8434
Bulletin of the Wahl-Henius Institute, 16148

- Contributions from The New South Wales National Herbarium, 16149
- Fisheries Research Board of Canada, Bulletin, 5277
- Istituto di Sanita Pubblica [Rome], Rendiconti, 1687A
- Journal of Endocrinology, 12491
- of the Entomological Society of S. Africa, 7086
- of the South African Forestry Association, 1668
- Lloydia, 3435
- Psychiatry, 5280
- Psychosomatic Medicine, 7088
- Rivista Forestale Italiana, 8897
- Zeitschrift für Altersforschung, 12498
- scientific, evaluation, 10707
- Periodicity. (See also *Climate*; *Photoperiodism*; *Population*; *Rhythm*; *Seasons*.)
- in abundance of insect pests of potatoes, 6697
- in allocation of racial characters, man, 17008
- asexual, in avian malaria, factors affecting, 10510
- biological, in cell model, 182
- in carbohydrate content, alpine plants, 12084
- diurnal, in blood Hb, cattle, 16423
- man, 10914
- in blood picture, man, 3968
- development in infant, 12643
- in feeding and breeding of plankton, 5393
- in movements of rock bass and common sucker, 14419
- in vertebrates and invertebrates, 9452
- of division rate of *Paramecium*, 10519
- in emergence of chironomid, 9043
- flarial, dog, 5095
- lunar, effect on germination of spruce seed, 8543
- in marine algal communities, 121
- of mysids off Plymouth, 1850
- of phytoplankton in Lake Michigan, factors affecting, 1851
- of plankton algae in Windermere Lake, 5398
- of setting in relation to lunar tidal cycles, *Ostraea*, 5407
- sexual. (See *Estrus*; *Menstruation*.)
- in soil distr. of spp. of symphylans, 9003
- Perionyx excavatus*, in Formosa, 6814
- Periophthalmidae (Pisces), p.1880^a
- Periophthalmus* (p.1880^a) *barbarus*, skull descr., 5153
- Periphyton, definition, 18084
- Periplaneta* (p.1875). (See also *Cockroach*.)
- americana*, blood cells, structure, count and degeneration, 7935
- campaniform sensilla on legs, 5685
- mechano-cardiogram of, 5686
- non-nervous elements in C.N.S. differentiation, 4400
- segmental bloodvessels, form and function, 16965
- ventral nerve cord, electrical activity, 16703
- Periploca graeca*, in Italy, 13764
- Periplocus*, n. sp., 12414
- Periptera* (p.1866²), in tropical America, key, 10126
- Periptychidae (Mammalia), p.1883³
- Periptychus* (p.1883³), n. spp. from Eocene, 5225
- Perisierola* (p.1878⁴) *nigrifemur*, affecting pink bollworm, 12231
- Perisperm. (See *Seed*.)
- Perisporiaceae (Fungi), p.1861³
- taxonomy, 13733
- Perisporiales (Fungi), p.1861³
- Perisporium* (p.1861³) *funiculatum*, sexuality, cytology, 13727
- Perissodactyla (Mammalia), p.1883³
- Peristalsis. (See *Intestine*; *Stomach*.)
- Perithecium. (See under *Fungi*.)
- Peritoneal cavity, development of *Ligule* plerocercoids in, cat, rabbit, 6739
- Peritoneal fluid, ion equilibrium with blood plasma as affected by parathormone, dog, 3798, 3799
- Peritoneum. (See also *Abdomen*.)
- diffusion of Ca, Mg and P into, 12643
- parathyroid hormone and intravenous Ca as affecting, 9075
- visceral and parietal, innervation, vertebrates, 4333
- Peritonitis, appendicular, preoperative serotherapy, 4527
- canine spreading, pronitosis therapy, 4572
- colon-bacillus induced, antiserum therapy, 4525
- chemotherapy in animals, 17259
- in congenital syphilis, 9602
- sulfonamide therapy, 4555
- Peritricha, physiology of contractile vacuole, 6768, 15977
- Peritrichida (Protozoa), p.1868⁴
- Perkinsiella vastatrix*, as vector of Fiji disease of sugarcane, 15828
- Permeability. (See also *Absorption*; *Diffusion*; *Membrane*; *Plasmolysis*; *Ultrafiltration*.)
- of albuminous membrane, tannin as affecting, 12647
- of algae to electrolytes, kinetics, 15724
- of *Allium* epidermal cells to electrolytes, factors affecting, 18993
- of blood vessels. (See under *Blood vessels*.)
- of branchial epithelium to cetylquinoleinium, 9082
- of cell membrane, review, 3551
- cellular, lipoids and, 10842
- constant, measurement, 1887
- of *Elodea* membranes, light as affecting, 13991
- of erythrocytes. (See under *Erythrocytes*.)
- of fibrin clots, 483
- of fish eggs, 10844
- of gastric glands to glucose, 12643
- of *Halicystis* to water, measurement, 15725
- of hemato-encephalic barrier. (See under *Hematoencephalic barrier* and *Meninges*.)
- as influenced by:
- agaric, abietic and lichesteric acids, fish, 4112
- choroid plexus extract, tissues, 16294
- heat, of potato-tuber tissue, 1027
- radium, phola eggs, 9107
- urea, muscle, 5429
- of intestine. (See *Intestine, absorption*.)
- of lacrimal glands to glucose, 16486
- of *Nitella* cells to electric current, 1391
- of onion epidermal cells to dyes, factors affecting, 3068
- placental. (See under *Placenta*.)
- of plant cells, nature, 3069
- to urea and glycerol, factors affecting, 1363
- of plant epidermis to hormones, 5669
- polarization and, frog-skin, 16300
- review, 7244
- of root and muscle cells, ion series in, 12657
- of sieve tube expts, 10166
- of skin. (See under *Skin*.)
- of tissue membranes to neutral red and cyanol, 10835
- of tooth enamel to mineral salts, 5908
- of *Valonia* to ammonia, kinetics, 10309
- to ions, kinetics, 8073
- of *Vicia faba* roots, factors affecting, 18992
- of wheat cells, winter vs. spring vars., 13806
- of yeast cells, effect on metabolism, 4924
- Permutite, effect on lungs, 11367
- Pernamyl forte, in therapy of pernicious anemia, 14928
- Pernettya* (p.1866⁴), tax., 4778, 15507
- culture and use as ornamentals, 11989
- Pernicious anemia. (See *Anemia, pernicious*.)
- Pernocton, anesthetic for rabbits bled for serum, 2297
- effect on metabolism, rabbit, 7778
- on vasomotor reflexes, 16752
- toxicity, rabbit, 16766, 16767
- Pernospira tabacina*, on tobacco, affecting field plants, 3142
- Perognathus* (p.1882⁴), tax., 1654
- 5229, 10656, 18096
- 18102, 18103, 18104
- flavescens perniger*, in Iowa, 18105
- pacificus*, habits, life hist., 18086
- penicillatus seorsus*, substitute name for, 14312
- Peromyscus* (p.1882⁴), tax., 5208
- 7042, 7056, 8860, 8861
- 8862, 10659, 18096, 18100
- chromosome numbers in spp. of, 1717
- daily catch in relation to temp., Minnesota, 3496
- races in Cascade Mts., 18101
- sexual maturity in, 5215
- eremicus*, body dimensions and pelage color, 5860
- gossypinus*, *Eurytremia* from, 17940
- maniculatus*, coastal habitat unfavorable, California, 14312
- bairdi*, in New York, 5219
- hereditary hair deficiency, post-juvenile nude, 12544
- inheritance in, 8946
- osgoodi*, variability in mts. of Utah, 10664
- nuttalli*, range, Virginia, 5243
- nuttalli*, in Kentucky, 5254
- Peronoplasmodium* (p.1861³) *densa*, on *Rhinanthus crista-galli*, notes, 6355
- Peronospora*, new name, 2811
- destructor, attempted culture, 17502
- on onion, survey and control, in New York, 3169
- galligena*, on *Alyssum*, 12123
- tabacina*, on tobacco, 3151
- 4999, 6635, 6683
- control by benzene fumigation, 8630
- control by benzol fumigation, 6682
- present status of problem, 8604
- in tobacco seed beds, control, 1455
- 1456
- Peronosporaceae (Fungi), p.1861³
- Perosis, avian, blood and bone phosphatase in, 3587
- Mn preventing, 2695, 2696, 9166
- mineral salts as affecting, 6251
- Peroxides. (See also *Hydrogen peroxide*.)
- bacterial production and significance, 15278
- role in acetaldehyde action on adrenalin, 7811
- Persea* (p.1865³). (See also *Avocado*.)
- n. sp., 6437
- americana*, floral anatomy, 11927
- fruit abscission, 6505
- Persimmon. (See also *Diospyros*.)
- Cephalosporium* wilt, dist. in U.S.A., 15890
- wilt disease, 12162
- yield and fruit-drop, girdling as affecting, 13886
- Personality, allergy in relation to, 2590
- Persoon, Christian Hendrik, biography, 7076
- Perspiration. (See *Glands, sebaceous*; *Sweat*; *Sweat glands*; *Water, loss*.)
- Pertusaria* (p.1862³), tax., 15473
- Arctic and sub-Arctic spp., 8410
- Pertussis*. (See also *Hemophilus pertussis*.)
- convalescent-serum therapy, 11548
- diagnosis, serological vs. cough-plate methods, 4611
- experimental, 8232, 17319
- with atypical organism, 11632
- fever in, heterobacteria and, 882
- Hemophilus influenzae* types (new) from, 4460A
- immunity to, dissociation factors as affecting, 9865
- intracutaneous tests for, 15274
- immunization, antitoxic horse serum therapy and prophylaxis, 17120
- recommended procedures, 11560
- statistics on active, 9861
- by undenatured bacterial antigen vs. phase-I pertussis vaccine, 17123
- mortality statistics, 15553
- occurrence of encephalitis due to equine encephalomyelitis virus in, 629
- problems in, 15300
- sera from, immune reactions by, 8108
- mouse protection test, 15153
- toxin neutralization negative by, 8108
- serodiagnosis, by agglutination, 8109
- sulfanilamide in, 9865
- vaccine, bulk production and clinical evaluation, 4430
- virus-pneumonia in infants after, 11614
- Pervitin, pharm., 7767
- Pest, fowl. (See *Fowl plague*.)
- Petal. (See *Flower*.)
- Petalochilus* (p.1876³), n. var., 8769
- Petasiger* (p.1869³) *nitidus*, morph. and life history, 12289
- Petauroides*, tax., 14214
- PETCHIOMYCES (Fungi) (p.1862²), 8390
- Petiole. (See *Leaf*.)
- Petrel, fulmar, psittacosis in, 8280
- stormy, psittacosis-like broncho-pneumonia virus from, 4589, 4600
- Petri dish, photography, 7066
- Petrocephalus* (p.1879²) *stuhlmanni*, retina, structure, 13314
- Petrochelidon* (p.1881⁴) *albifrons minima*, 1649
- Petrodroma* (p.1881⁴) *leucoptera longirostris* in North Pacific, 5188

- Petroica* (p.1882²), n. spp.,.....7013
Petrolatum liquid, effect on cancer incidence, Argentina,.....13222
Petroleum, distillates, rôle in tumor etiology,.....16886
 fungicidal value in Bordeaux mixture,.....17845
 as insecticide. (See *Insecticides; Sprays*.)
 as plant spray, phytocidal properties,.....1469
Petrolisthes armatus, rôle of acetylcholine in autotomy reflex in,.....13005
Petromyzon (p.1878²), embryology, guide,.....9765
Petromyzonidae (Marsip.), p.1878². (See also *Lampreys*.)
Petronia (p.1882²), n. subsp.,.....8845
Petenkoferia, review,.....6317
Petunia (p.1867²), diploid and tetraploid,.....72
 directed heritable variations conditioned by euploidy,.....5320
 inheritance of a hormone lack, 16185
 inheritance of variegation,.....14360
 mineral metabolism, in grafts and mutants,.....10315
 polyploidy induced by colchicine,.....14347
 self-sterility,.....5319
Peucectia viridans, predator of *Protoparce*,.....5035
Peizaceae (Fungi), p.1862²
Peizales (Fungi), p.1862²
Peizella (p.1862²), n. sp.,.....15453
 Pfau, Alexandre S., biography,.....1684
Phacelia (p.1867²), n. combs.,.....8842
 transf. to *Eucrypta*,.....4779
Phacidia (Fungi), p.1862²
Phacidiales (Fungi), p.1861⁴
Phacophorus maculatus liver cells, Golgi apparatus,.....2479
PHAEASPIS (Fungi)(p.1861⁴),.....15453
Phaedranassa (p.1865²) *chloracea*, general morphology,.....4772
Phaenopterinae (Lepidoptera), p.1877¹
Phaenocora (p.1869²), n. sp.,.....12300
Phaeocryptus gaumannii, leaf cast of Douglas fir due to,.....14048
Phaeofabraea (p.1862²), n. spp.,.....17500
Phaeonectria (p.1861⁴), n. sp.,.....15453
Phaeophyceae (Algae), p.1860³
Phaeopus (p.1881³), food habits,.....9064
Phaeosporales (Algae), p.1860³
PHAEOTHYRIOLUM (Fungi)(p.1862²)
 eucalyptinum, on *Eucalyptus*, 8407
Phaethon (p.1881²) *aethereus*, in Australia,.....7007
Phaethontidae (Aves), p.1881²
Phagocyte(s). (See also *Leucocytes; Phagocytosis*.)
 mononuclear, mobilization and capacities in normal vs. tuberculosis-immunized animals,.....8129
 in ovarian follicles during inanition,.....4370
Rana, rôle in antibody formation,.....13476
 tuberculo-proteins vs. lipids as affecting,.....901
Phagocytosis. (See also *Leucocytes; Phagocytes*.)
 in anthrax, mechanism,.....9882
 of diphtheria bacilli,.....13429
 of dye-protein antigens,.....13476
 growth phases of staphylococci and,.....9889
 as influenced by:
 capsules and polysaccharides,.....9873
 diet, fasting and thirst therapy,.....8148
 malnutrition in children,.....8106
 oral vs. subcut. immunization,.....4524
 protosol,.....6154
 sulfanilamide,.....6154
 in leucemia,.....12355
 in lobar pneumonia,.....2537
 by malignant histiocytes,.....2356
 of nerve cells, due to inanition and age, mouse,.....11388
 in normal vs. tuberculosis-immunized animals,.....8129
 of pneumococci, mechanism, 9881, 9882
 promoting power of serum, irritation of splanchnic vs. vagus nerves as affecting,.....4476
 of pyogenic staphylococci, mechanism,.....9882
 of trypan blue, age as affecting,.....9833
 of typhoid bacilli, in immune vs. normal sera,.....18496
Phainopepla nitens leipida, seasonal changes in testis,.....7581
Phakopsora (p.1862²), from Venezuela,.....6345
Phalarocorax (p.1881⁴). (See also *Cormorants*.)
 feeding habits of,.....5201
 species in California,.....5207
Phalaeninae (Lepidoptera), p.1877¹
Phalangidae (Arachnida), p.1874¹
Phalaridae, chromosomes, number, form and taxonomic significance,.....5290
Phalces longicaepus, taxonomy,.....6939
Phalloidin, pharmac.,.....4167
Phallostethidae (Pisces), p.1879¹
Phamdia quelen, spawning induced by pituitary extracts,.....5895
Phantoma (p.1875²) *veronae*,.....12377
Phantomyst, sterilization of air and surfaces by,.....6216
Phaonia (p.1878²), n. sp.,.....6894
Pharacocoracidae (Aves), p.1881²
Phareodus (p.1879²), tax.,.....5161(E)
Pharmacognosy, history, in Carolina, 1333
Pharmacology, apparatus,.....14492
 chemotherapy, book,.....9917
 history, in U. S. A.,.....21
 medical teaching,.....16788
 organotropism study,.....16797
 textbooks,.....1453, 4122
Pharmacopoeia, U. S. abstracts of literature on official drugs,.....12493
Pharmacy, enteric coatings,.....349
Pharmachrus (p.1881⁴) *moenino*, plumage changes,.....16063
Pharyngognathi (Pisces), p.1880³
Pharyngostomum (p.1870²) *cordatum*, life cycle,.....6302
Pharynx, anatomical relationships in newborn and adults,.....8005
Phaseum (p.1863²), transfers from,.....4748
Phaseolus (p.1866²). (See also *Bean*.)
Erysiphe polygoni on, resistance, 17814
 intercellular leaf volume determinations,.....6451
 somatic segregation of flower color,.....1755
 structure in relation to soil moisture,.....12587
lunatus, cytology of dormancy,.....8909
multiflorus, diurnal movements of, 1406
 electric potentials in, electric current as affecting,.....15756
polystachyus, habitat,.....13750
vulgaris, fluorescein translocation in, path of movement,.....17713
 growth of isolated embryos, tryptophane as affecting,.....14006
 growth and mitosis, SH conc. related to,.....10314
 root nodules, auxins found in,.....3169
Phasianidae (Aves), p.1881²
Phasianus (p.1881²). (See also *Pheasant(s)*.)
colchicus, game take, agricultural land use and,.....14436
 grit requirement,.....5423
torquatus, *Capillaria* lesions in, 12263
 winter survival in relation to food and cover,.....1879
Phassus purpurascens, mating,.....6935
Pheasant(s). (See also *Phasianus* and other genera.)
Capillaria lesions in,.....12263
 eggs, artificial incubation,.....14437
 embryo position vs. mortality,.....784
 equine encephalomyelitis in,.....1018
 inheritance of melanism,.....7136
 laryngotracheitis, pathology, virulence and infection route as affecting,.....8171
 night lighting, effect on egg laying,.....5416
 population, survey in Michigan,.....5417
Pheidole bergi, as interm. host of *Raillietina*,.....14160
Phelloderm, origin in *Myrmecodia*,.....2916
Phellogen. (See also *Cork; Phelloderm*.)
Phelsuma madagascariensis, *Agamascaris* from,.....14216
Phenacostethus (p.1879²) *smithi*, anatomy of,.....6972
Phenanthrene, derivatives, carcinogenic action, cholesterol and,.....13197
 effect on heart, frog,.....13223
 on tumors,.....16884
 picrate, distilled from irradiated cholesterol,.....13224
Phenobarbital, effect on:
 convulsant action of thujone, rat,.....7801
 heart, pituitrin and,.....9525
 heat formation in brain,.....7760
 lactic acid in brain,.....5788
Phenol(s), adsorption by protein in prep. of biological products,.....4651
 bactericidal action on tubercle bacilli,.....11690
 carbonic acid, hydrolysis and synthesis by emulsin,.....12665
 color reaction in relation to genes, wheat,.....7182
 derivatives, effect on *Ascaris* of pig in vitro,.....17267
 on complement fixation,.....929
 dinitro-. (See *Dinitrophenol*.)
 effect on leech muscle,.....13186
 intestinal resorption,.....7519
 oxidized, reversible action in deamination of amino acids,.....2023
 p-amino-, porphyrinuria due to, rat,.....16444
 para-substituted, detm.,.....216
 poisoning, diet as affecting,.....12784
 substitution products, quinoline precipitation reactions with,.....17370
Phenology. (See also *Anthesis; Climate; Periodicity*.)
 of *Phleum pratense*,.....8981
 of winter rye in North German Plain,.....10761
Phenolphthalein, in jaundice,.....551
Phenolsulfophthalein, excretion, renal blood supply and,.....7562
 as indicator in flocculation test for malaria,.....6753
 in leprosy therapy,.....9940
Phenothiazine, for codling moth, control,.....12234
 effect of particle-size on efficiency,.....12239
 fate in body,.....2294
 fungicidal and phytocidal properties,.....3169, 15871
 as larvicide, in mosquito control,.....1518
 toxicity of various fractions to insects,.....1523
 in trichinosis therapy,.....11596
 as urinary antiseptic,.....2334, 7756
 1-Phenyl-5-(2'-alkoxyphenyl)-3-β-piperidinoethylpyrazolone derivatives as local anesthetics,.....7780
Phenylacetic acid, toxicity,.....14786
Phenylalanine, in egg albumin,.....12802
 in study of physiological genetics, guinea pig,.....14373
Phenylalkanoic acids, prep. and properties,.....4656
Phenylarsenoxides, spirocheticidal action,.....13178
Phenylcinchoninic acid. (See *Cinchophen*.)
Phenylethylamine, dimethyl-p-hydroxy-, pharmac.,.....13181
 HCl, effect on central nervous system,.....532
Phenylethylenediamine derivatives, effect on blood pressure,.....13143
Phenylhydrazine, action in polycythemia vera,.....2297
 in exptl. erythroblastosis,.....10492
Phenylisopropylamine. (See *Benzedrine*.)
 p-hydroxy-. (See *Paradrine*.)
Phenylmercuric compounds, bacteriostatic comparisons,.....2877
 toxicity,.....14864
Phenylmethylaninoethanol, p-hydroxy-. (See *Synephrin*.)
Phenylphenol, o-, germicidal efficiency,.....2672
Phenylsulfonides, in gonorrhea,.....15264
Phenylthio-urea, taste threshold for, racial distr.,.....9462
Phenylurethane, effect on grains of wheat,.....16156
Pheretima agrestis responses to light, nervous system function in, 11128
Phialodiscus (p.1866²), n. spp.,.....2843
Philaete (p.1881²) food habits,.....9064
Philemon (p.1882²) *citroregulatio*, distribution, life hist., taxonomy,.....10643
Philodimidae (Rotatoria), p.1871⁴
Philodromus (p.1874²) *armoricus*,.....17985
Philonicus (p.1877²), n. sp. (N),.....6150
PHILONTHELLUS (Col.)(p.1876²), subg. of *Philonthus*,.....6866
Philonthus (p.1876²), n. spp.,.....3326, 6866
Philophthalmidae (Platyhelminthes), p.1870¹
Philopteridae (Mollusca), p.1875²
Phloperus (p.1875²), tax.,.....8797
Phlebitis, tobacco hypersensitivity in,.....6056
Phlebotomus (p.1877²). (See also *Leishmaniasis*.)
 tax.,.....1619
 development of *Leishmania* in,.....17896
 ♀♀, identification,.....1516
chinensis, *Leishmania* in, natural infection,.....17893
langeroni, as *Leishmania* vector, Sudan,.....6740
macedonicus, as *Leishmania* vector, 1006
6738

- papatasi*, *Leishmania* in, feeding expts., 14156
as *Leishmania* vector, 6788
wuchereria, microfilaria in stomach, 3247
Phlegethontius quinqueaculata. (See also *Tobacco worm*.)
Phleospora trifolii var. *recedens*, *Stagonospora recedens*, 8109
Phlepius (p.1875⁴) *supinus*, 1629
Phleum pratense. (See also *Timothy*.)
growth, in relation to latitude, 9981
pollen, antigenic relationships, by Dale test, 15142
rooting of cuttings, plant hormones as affecting, 10306
Phloem. (See also *Root*; *Sap*; *Stele*; *Stem*; *Translocation*; *Vascular system*, *plant*.)
abnormalities, in virus diseases, review, 3124
bacterial pathogens, physiol. requirements, 4970
of conifers, histology and differentiation, 15517
cytokinesis, omission in fibers, *Nicotiana*, 1168
development, flowering and, 10172
structure and, *Nicotiana*, 1167
review, 17556
role in translocation, 4936
structure and function, relationship, 10166
Phloretin, effect on liver metabolism, 16485
on phosphorylase activity, 5451
Phloridzin, conversion of protein to glucose after, dog, 9195
diabetes. (See *Diabetes*, *phloridzin*.)
effect on:
fat and fatty acid resorption, 9253
glycogen breakdown in liver extracts, 186
intestinal absorption of sugars, 9265
liver metabolism, 16485
phosphorylase activity, 5451
proteolysis of liver sections, 9091
streptococci (group-C) infections, 9936
factors affecting muscle comp. after, 12643
Phloroglucinol, effect on phosphorylase activity, 5451
Phlox (p.1867²), tax., 1158, 6403
Phlyctaenodes (p.1876³), syn., 10595
Phlyctidum, *Tylochytrium* n. n. for, 15452
Phlyctis (p.1862³), tax., 15473
Phoca (p.1883²) *vitulina*, cerebral cortex study, 456
in Great Britain waters, 5247
Phocidae (Mammalia), p.1883²
Phocides (p.1876⁴), n. sp., 6932
batabano, larval and pupal stages, 3357
Phoenicin. (See under *Pimenta*.)
Phoenicuroides (p.1882²), n. subsp., 7023
Phoenicurus (p.1882²) *p. phoenicurus*, bird banding, 14296
Phoenix *dactylifera*. (See also *Date palm*.)
Pholadidae (Mollusca), p.1872⁴
Pholadidea (p.1872⁴), larva described, 3301
Pholas (p.1872⁴) *costata*, blood cell morphology and blood coagulation time, 5884
Pholidosauridae (Reptilia), p.1880⁴
Pholidosaurus (p.1880⁴), cast of brain and tympanic cavities, anatomy, 13287
Pholiota (p.1862²), taxonomy, 11825
mutabilis, fruiting, molds as affecting, 8405
Pholisma *paniculatum*, 4792
Pholisora (p.1876⁴), n. sp., 6932
Pholisoma (p.1867⁴), tax., 17519, 17520
Phoma (p.1862⁴), n. spp., 10351
cellulose-decomposing spp., 1033
terrestri, on onion, infection process, 1450
nature and significance of pigments of, 15852
Phomaceae (Fungi), p.1862⁴
Phomales (Fungi), p.1862⁴
Phomatospira (p.1861⁴), n. sp., 15453
Phomopsis, on citrus, control, 12155
citri, latent infection of tropical fruits due to, 8599
gardeniae, on gardenia, control, 3162
juniperovora, on native red cedar trees, 3169
vaccinii, twig blight of blueberry due to, 6634
Phonation. (See *Speech*; *Voice*.)
Phora (p.1877⁴) *incrassata*, as parasite of honeybee brood, 15940
Phorandron (p.1865²), n. spp., 2828A
Phoridae (Diptera), p.1877⁴
Phormia (p.1878³), factors in seasonal abundance, 5058
traps, location of, 5061
regina, in animal wounds, treatment for, 15923
larvae, ingested, fate of, 1515
in myiasis, incidence of, 5056
Phormidium (p.1860⁴), n. sp., 3385
in sewage bacterial beds, as influenced by enchytraeid worms, 6217
thermal spp., 6335
Phoronidea, p.1871⁴
Phosgene, poisoning, in welding, 5878
Phosphate(s). (See also *Phosphoric acid*; *Phosphoric acid esters*; *Phosphorus*.)
amt. in mollusc, 6824
B in, amount and detn., 4862
in buffer solution for Giemsa stain, 3702
colloidal, of Fla., as fertilizer, 13822
consumption, in English Channel, 1847
deposition in liver, 7508
detn. in blood, 10869
in muscle and nerve, 4014
in sea water, salt error, 1845, 1846
effect on blood sugar, insulin antagonism and, 7898
excretion in dogfish, 14672
as fertilizers. (See under *Fertilizers*.)
fixation by soils, bases as affecting, 17614
kaolinite as affecting, 13824
fluoride ion fixation by, 16296
intestinal absorption, 16566
organic, detn., urea and NaCl as affecting, 16366
in soil. (See under *Soil*.)
tricalcium, regeneration, for removing Fl from drinking waters, 2419
Phosphatides. (See *Phospholipids*.)
Phosphenes, localization after electrical stim., man, 14714
Phosphocreatine. (See under *Muscle*; *Phosphoric acid esters*.)
Phospholipids. (See also *Lipids*; and especially *phospholipids*, e.g., *Cephalin*, *Lecithin*, *Sphingomyelin*.)
in bacterial antigens, removal, 17188
in bile, 12643
of blood sera, aging as affecting, 13501
of cell nuclei, 16496
detn., micro-, 1928
effect on complement, and mechanism, 927
on respiratory metabolism, man, 9188
ether insoluble, in plasma and erythrocytes, man, 2394
formation, spectrophotometric study, 14540
in frog heart, 4172
in liver during lipolytic action, 5587
in malignant tumors, 13210
metabolism, of brain, 3695
radio-active P as indicator, 12818
origin in hens' eggs, 4425
oxidation, aminopyrine and antipyrine as affecting, 14785
by liver protein, as influenced by metals, 7503
by vanadium, 5446
oxidized vs. unoxidized, 927
of *Phytomonas tumefaciens*, comp., 15814
prep. and properties, 3696
role in blood coagulation, 12643
tuberculo-, effect on normal vs. tuberculous animals, 912
hypersensitivity to, without infection, 900
Phosphoprotein. (See specific phosphoproteins, e.g., *Casein*.)
Phosphoric-acid, chaulmoogra-protein compounds, prep. and comp., 4575
dissociation constant, 9084
effect on coronary circulation, 14787
on intake of Mn by spruce plants, 10264
in relation to growth of *Robinia pseudoacacia*, 12015
Phosphoric-acid esters. (See also *Nucleic acids*; *Nucleotides*; *Phospholipids*; etc.)
adenosine, effect on paroxysmal tachycardia, 2270
prep., chemical and fermentative, 1893
triposphoric acid, breakdown in muscle after mono-iodoacetic acid, 9504
adenylic acid, effect on anesthesia, 4169
formation from adenosine by yeast, 10985
from muscle, hydrolysis, 12681
in small intestine, 9251
adenylic triphosphate, in vasodilator substance of red cells, 2333
aminoethyl-, in small intestine, rabbit and guinea pig, 9251
cholamine, effect on blood pressure and intestine, 7761
detn. of each when present together, 3584
effect on blood sugar after hepatectomy, dog, 8300
formation in brain tissue, 14719
in kidney extracts, 14455
in liver brei, 12816
glucose-1-phosphate, role in blood sugar formation and liver glycogen synthesis, 14448
purification, 4047
glycerophosphate, enzymic hydrolysis, 12632
phosphatase action on alpha and beta, 11762
synthesis, 10979
hexosediphosphate, detn. in muscle, 14742
hydrolysis, 12651
phosphocreatine, in anemic blood, 1950
factors affecting enzymatic breakdown, 402
muscular resynthesis, Pb poisoning as affecting, 11158
phosphogluconic acid, oxidative breakdown, 7263
pyrophosphate, effect on:
ascorbic acid, 5570
metabolism of tissues, 7408
oxidation of amines and amino acids, 206
ester of thiamin, properties, 3566
reactions, enzymes in, 12661
phosphosaccharomutase in, 12666
Phosphorus. (See also *Phosphate*.)
absorption by algae, light as affecting, 15698
by diatoms, N as affecting, 13975
acid soluble, in tissues, age as affecting, man, 3659
vs. ultrafilterable in blood, in health and disease, 11325
in ash of *Cysticercus*, 17910
assimilation, cattle, 7455
available, crop yields and, 15564
in Indian foods, 5524
from milk and inorganic source, 7453
balance, of adolescent Chinese boys on low cost diet, 2010
as influenced by:
Ca and P in diet, rat, 12643
liver extract and vit. D, in idiopathic steatorrhea, 3739
low protein diet, 5520
medium protein diet, women, 5522
ultraviolet in osteomalacia, 10990
vit. C and cortin, 2035
vit. D excess, 309
lymphomatous animals, 9171
in osteomalacia, 14669
in blood. (See *Blood*, *phosphorus*.)
in cheese, British, 4419
in chickens, age and, 14543
compounds, origin in chick embryo, 5958
conc. in heart in heart failure, 13117
deficiency, in cattle, 15090
effect on:
hematopoiesis, 2032
lettuce, 17677
tomato hypocotyl, 6564
young rats, 16445
in sugar cane, 1192
vit. D₂ as affecting, rat, 9240
in dentine, 4350
in diet. (See under *Diet*.)
diffusion into peritoneum, 9075, 12643
parathormone as affecting, dog, 3798
in diseased spleens, 11812
effect on:
absorption of N and S, oats, 12059
Ca retention, 2038
catalase, from apple seedlings, 14030
chronic idiopathic parathyroid tetany, 9636
growth, *Cunninghamella*, 17673
Mn utilization, fowl, 14552
N absorption, barley, 1350
peach trees, southeast U. S. A., 15607
soils, factors affecting, 13802
tobacco, 15700
toxicity of Sudan grass, 1177
in egg yolks, vit. D supply and, 6016
as fertilizer. (See under *Fertilizers*.)
fixation by soils, relation to Fe and Al, 6501

- Phosphorus (continued)
 in forage plants, factors affecting, 15096
 in hens' eggs, origin, 14425
 ingestion, effect on bones, 1467
 lipid, detn., 16352
 in marine zooplankton, 10792
 metabolism, of bones and teeth, rat, 14547
 in leucemic blood, 11332
 review, 14440
 in yeast, 15763
 in oats, silicates as affecting, 15529
 partition in larvae, imago and pupae of *Calliphora*, 12781
 in peach twigs, hardness and, 14027
 radioactive, distr. in tissues, 12643
 effect on leukemias, 16321
 as indicator of phospholipid metabolism, 3895
 in study of glycolysis, 5544
 of muscle metabolism, 7685
 in therapy, 9171
 requirement, of older men, 7457
 in skin of canning peas, changes during ripening, 10218
 in soil. (See under *Soil*.)
 in soybeans, distr. changes during germination, 3081
 transformations in decomp. of plant materials, 17423
 vit. D assay and, 16542
 Phosphotungstic acid, reaction with sulfhydryl and disulfide compounds, 208
 Photograph, description, 7321
 Wassermann reaction recorded by, 4491
 Photometer, for detn. of serum bilirubin and Hb., 9118, 9119
 in phosphatase test of pasteurization, 11783
 Photidae (Crustacea), p.1874¹
Photinia (p.1865⁴), tax., 15486
arbutifolia, effect on *Lecanium* morph., 3347
Photinus pyralis, synchronous rhythmic flashing, 6869
 Photoactivity, of irradiated cholesterol, 9594, 9595
 Photoallergy, to sulfanilamide, 11585
 Photocell, rectifier, for detn. of radiation from sun and sky, 16243
 Photodensitometer, photoelectric, in detn. of wts. vs. counts of microorganisms, 1060
 Photodynamic action, histamine liberation from lungs and, 9103
 of safranin on gram-negative bacilli, 2687
 of urine, of mice treated with blastogenic hydrocarbons, 16652
 Photodynamic hemolysis, 10884, 10885
 10886, 12643
 Photodynamic sensitization. (See *Photosensitization*.)
 Photoelectric cell, in recording of hemolysis, 4491
 Photoelectric nephelometer, in detn. of wts. vs. counts of microorganisms, 1060
 Photography. (See also *Motion pictures*.)
 aerial, as aid to botanical survey, 1838
 of birds, 7064
 camera absolute silent, construction, 235
 in cold climates, technic, 1670
 color, of large specimens, 7065
 detail in, control technic, 7061
 dual camera mounting for, 12465
 electrography, technic and biol. applications, 14315
 eye, technic, 3
 infrared, book, 10678
 as aid in ecological surveys, 12591
 of intestines, 14487
 lens aberration, test for, 7062
 in medicine, equipment for, 12467
 micro, color filters for, 9713
 colored, simple technic, 4
 in Dufaycolor, technic, 16125
 infra red, of bone structure, 10877
 manual, 12112
 microscope technic, 1668
 moving, technic, 5260
 paper and condenser illumination for, 16119
 photoelectric exposure meter for, 1667
 table for, 228
 technic, 5257
 of petri dishes, technic, 7066
 of plants, technic, 1666
 projection of color of films, 230
 of small animals, 16107
 use in mycology, technic, 7060
 of wild life, 3414
 X-ray. (See *X-ray, photography*.)
 Photometer, Eder-Hecht, as light measuring instrument, 8986
 in flocculation test for malaria, 6753
 fluorescent, blood studies with, 14489
 for measuring daily amts. of radiation, 16243
 subjective, descr., 7649
 use in detn. of Fe., 9130
 Photometry. (See *Light, measurement*;
Spectrophotometry.)
 Photomicrograph. (See *Motion picture*.)
 Photomicrography. (See under *Photography*.)
 PHOTONECTOPS (Pisc.) (p.1879²) multi-punctata, 10619
 Photooxidation. (See *Photodynamic action*.)
 Photoperiodism. (See also *Light*;
Periodicity.)
 in *Anethum graveolens*, 15740
 in bluegrass, 17708
 in *Chrysanthemum indicum*, 3082
 in *Crotalaria juncea*, 15742
 in field beans, 6480
 in mold (*Choanephora*), 15442
 in monochromatic light, 1379
 in plankton of fjords of East Greenland, 7221
 in plants, intermediate spp., 1378
 in potato, 12081
 in Peru, 6649
 relation to prime pelt production in mink, 17114
 role of light intensity in, 12080
 of plant hormones in, 4929
 8571, 17680
 in soybeans, effect on metabolism, 10318
 relation to light intensity, 4928
 in spinach, temp. as affecting, 15741
 in vegetables, 2990
 in *Xanthium*, N as affecting, 10317
 Photosensitivity, primary, to sulfanilamide, 11585
 Photosensitization, of bacterial spores, by ultraviolet light, 2754
 in cattle, as pellagra symptom, 11735
 of gram-negative bacilli, 2687
 by sulfapyridine and related drugs, 9922
 sulfonamide compounds causing, 15188
 Photosynthesis. (See also *Chlorophyll*;
Light.)
 of annual plants, ecol. significance, 7194
 in apple leaves, factors affecting, 17711
 of aquatic plants at different depths, 7230
 in buckwheat, effect on organic acid metabolism, 15768
 chemical aspects, review, 14440
 in cotton, breakdown of American vars. in India, 17798
 in forests, amount and factors affecting, 4981
 daily periodicity, 4981
 relation to form, 15640
 in green fruits, 4930
 in halophytes, 1842
 as influenced by:
 HCN, *Scenedesmus*, 15782
 H₂S, algae, 15781
 light, 1389, 4984, 6599
 light and temp., lichens, 12088
 lighting on one side, leaves, 12085
 nitrates, 14008
 organic compounds, *Chlorella*, 12109
 phyllchlorin, 3084
 potassium, 12058, 15702, 15743
 kinetics, 3083, 14009
 in lichens, 3504
 limiting factors, light and CO₂ as, 1880
 mechanism, 1381, 4932, 6601
 O₂ detn., dropping Hg electrode, 5499
 in plants, protein as index to, 15733
 quanta effects, *Blodaa*, 12087
 quotient, of *Streptococcus varians*, 13714
 rate in blue-green alga, 1069
 in *Fucus*, factors affecting, 1840
 relation to movement of stomata, apparatus and technic, 15745
 rôle of soil CO₂ in, 12083
 in soybeans, relation to drought resistance, 14024
 in strand and dune plants, 12082
 in tropical plants, 17709
 Phototropism. (See under *Tropisms*.)
 Photoxan, in plants, production and chem., 1611
 rôle in animal metabolism, 17669
 Photronic cells, Weston, as light measuring instrument, 8986
 Phoxocephalidae (Crustacea), p.1874¹
Phragmidium (p.1862²) *mucronatum*, on rose, physiologic specialization and germination factors, 1453
Phragmites (p.1864⁴), in dung of ground sloth, 7048
 Phrenic nerve. (See *Nerve, phrenic*.)
Phricetus (p.1875³), n. sp., 8785
Phryganidia (p.1877¹) *californica*, metamorphosis, rôle of hormones in, 9782
Phrymophyes (p.1875⁴), new species from Australia, 18016
Phrynosoma (p.1880²), identity of species in U. S., 18053
blainvillii color changes in, 3937
 Phthalic anhydride, sensitization to, asthma and rhinitis due to, 13443
 Phthaline dyes, effect on *Clonorchis sinensis* in vitro, 4552
 Phthiocol, anti-hemorrhagic activity, 16548
 Phthiracaridae (Arachnida), p.1874⁴
Phthiracarus (p.1874⁴), n. spp., 17982
 PHTHIRAPTERA (p.1874), relation to Mallophaga and Anoplura, 18039
Phthirus (p.1865⁵), n. spp., 2827A
 Phthisis. (See *Tuberculosis*.)
 Phytiscinae (Lepidoptera), p.1877¹
Phycomyces, spiral growth of sporangio-phore, mechanism of, 15731
 use in assaying for vitamin B₁, method, 1898
blakesleanus, growth of colony, thiamin and dextrose as affecting, 14003
 Phycomyces (Fungi), p.1861²
Phydeauxon (p.1878³), n. sp., 3351
 Phylaxis. (See *Immunity*.)
Phyllachora (p.1861⁴), tax., 2800
 8407, 17498, 17500
Phyllanthus (p.1866³), n. sp., 1132
 Phyllochlorin, chemistry, 6595
 effect on photosynthesis and extraction from spinach leaves, 3084
Phylloclonista citrella, on *Citrus*, feeding injury in relation to bacterial canker, 8628
Phylloclonista oleivorus, effect of sulfur spray control on scale population, 5019
 Phyllode(s). (See *Leaf*.)
Phyllodactylum (p.1869⁴) *lesteri*, in fresh-water shrimp, 1595
 Phylloidy, of abnormal floral organs, angiosperms, 15522
 in tomato and bean, 17555
Phyllophaga. (See also *May beetle*.)
 control on strawberries, 10392
 on maize, as affected by crop rotation, 17865
Phyllophora (p.1860⁴) *cuneifolia*, trans. to *Rhodomena*, 13726
reptans (*Gelidium* r.), 4729
Phyllophorus (p.1872³), n. sp., 3294
Phylloscopus (p.1882²), monograph, 18081
collybita, habits, 16101
Phyllospondyli (f) (Amphibia), p.1880¹
 status, 18051
Phyllosticta angulata, on apple, 15806
viridis (*Mycosphaerella fraginicola*), causing ash leaf-spot, life hist., 15471
Phyllostictina (p.1862⁴), n. spp., 17500
Phyllostoma superciliosum, rabies transmitted to livestock by, 9956
 Phyllostomatidae (Mammalia), p.1882²
 Phyllotaxy. (See also *Leaf*.)
 of *Ailanthus*, 6444
 of *Alstroemeria*, 13749
 hormones and x-rays as affecting, 10302
 morphogenesis in *Gentiana*, 2912
Phyllotoma, mandibles, structure and function, 17977
nemorata, weight and abundance of, sun vs. shade leaves as food, 5053
Phyllotopsis (p.1862⁴), spp. transferred to, 15462
 Phylogeny. (See also *Cytotaxonomy*; *Evolution*; *Ontogeny*; *Serodiagnostics*.)
 of animal kingdom, 3438, 14342
 of arthropods, changes in distr. of appendages during, 1694
 of blood groups, 17329
 of chromosomes, 8903
 chromosome number and, Leguminosae, 3450
 of *Crepis* spp. and hybrids, 63
 data, from animal behavior and psychology, 5281
 from reproductive processes, monkey and apes, 11104
 in Foraminifera, statistical studies, 14198
 relationships, precipitin test in detn., 6117
 serological detn., 6066
 of Turbellaria, from chromosome studies, 5300

Phymata-Picea

- 2071—

Picea (continued)

- abies*, germination affected by temp. and moisture.15667
 growth and yield, in northern Finland.15650
 susceptibility to snow breakage.10249
 timber quality in relation to growing conditions, in Latvia.15653
 yield tables for.15675
breweriana, in California.2824
excelsa, apical meristem morphology.6446
Flammula on.8404
 leaf characters at base vs. top.3030
 parasitism by *Adelges abietis*.3198
mariana, regeneration in Ontario.15665
Picea membranacea, from pickle brines.17405
 Picidae (Aves), p.1881⁴. (See also Woodpeckers.)
 Piciformes (Aves), p.1881⁴
 Pick's disease, path., in early adulthood.16942
 Pickerel. (See *Esox*.)
 Pickle, brines, film yeasts from.17405
 tank, nitrite content, changes and factors affecting.10046
 α -Picoline derivatives, prep. and properties.11260
Picramnia (p.1866²), n. spp.2828A
Picris (p.1867⁴), n. spp.17530
 Picrotoxin, convulsant action.7801
 effect on:
 alcohol depression.13178
 autonomic centers.5759
 barbiturate depression, rabbit.13188
 botulism.11233
 cardiac sinus reflexes.2296
 cerebral potentials, rabbit.7656
 hypothalamic functions of cat, motion picture film.2238
 lactic acid in brain.5788
 thiobarbital action on heart.525
 vegetative centers, rabbit.14812
 inactivation and excretion, rabbit.2295
 toxicity and antagonism to nembutal.534
Picumna (p.1875³), n. sp.8785
 (See *Dermatomes*.)
Piedra (p.1863²) *javanica*, skin disease due to.4633
Pieridae (Lepidoptera), p.1876⁴
Pieris (p.1876⁴) *rapae*, biol. control.3206
Pisma (p.1875³) *quadrata*, attacked by fungus (*Beauveria*).8665
Plesmatidae (Hemiptera), p.1875³
 Pig(s). (See also *Meat*; *Sus scrofa*.)
 absence of right kidney and ureter in fetal.11456
 amino acids in liver.12800
 anatomy, dissection guide.4813
 anesthetic for, nembutal as.11757
Ascaris from, monkey infection expts.15946
 for bacon, carcass characters, nature and variability.15097
 fat in factors affecting.9797
 growth, nutrition and.2500
 protein level for rapid.15102
 variation.15100
 behavior, sex cycle and.12643
 carotid ganglion, origin and development.9763
 cholera. (See *Hog cholera*.)
 choline-esterase in organs and tissues.3555
 concretions in stomach, comp.16558
 contagious bronchopneumonia in, histopath and virus origin.11625
Corynebacterium equi attacking.13662
 diaphragm, development.8037
 digit abnormalities.16201
 embryology, guide.9765
 erysipelas. (See *Erysipelas, swine*.)
 fat in, factors affecting.10986
 feeding exptl. cod-liver oil in.15093
 limited vs. full.9807
 self, free choice vs. no choice.17073
 feeds for, acidity vs. alkalinity in.5994
 amides as protein substitute.8071
 cacao shell meal as.9811
 coconut meat and corn as.4404
 dried turnip tops as.15094
 garbage as, effect on trichinosis incidence.6736, 14195
 glucose-ureid as protein substitute.8070
 pickled herring as.11476
 proso as.781
 potato and sugar beet silage as.11485
 in Germany, breed descriptions.11491
 glandular tissue, elements in, spectrographic analysis.13815

Pig (continued)

- growth, curve, normal.3707
 adequacy of water supply as affecting.17077
 protein level in ration as affecting.11477
 hepatectomy in.11757
 hybrid, immuno-genetical studies.7160
 influenza in. (See *Influenza, swine*.)
 inheritance of mammae.12556
 of wattled.12546
 intestinal adenoma, studies.11277
 kidney worms, control.17908
 litter, exchanging and growth.17071
 size, effect on subsequent litters.11478
 liver, acidophil lining of bile capillaries.7981
 dystrophia after cod liver oil feeding in young.2707
 lobule and cell, postnatal growth.16996
 parasites.12260
 longbones, wt. and composition, bilateral variation in.9708
 lungworm larvae, in earthworms, control.17915
 lymphocytoma in.15368
 lymphoid leukemia in.15368
 metabolism.9809
 mineral.14548
 normal serum, effect on pneumococci pneumonia.8150
 nutritive requirement.12852
 olfactory formations.9676
 paratyphoid in.2705
 pasteurellosis.6222
 piroplasmosis.12246
 plague. (See *Salmonella suispestifer*.)
 Poland-China, genetic history.8956
 prenatal wt., effect on size and number of pigs.5979
 production, cost, in Philippines.17075
 in Kansas.4402
 retina, Cs content.5920
 rhinitis chronica atrophicans in.2698
 salivary conditioned reflexes in.12643
Salmonella suispestifer para-C fatal infection in young.13667
 sensitivity to evipan, age and.7757
 skull measurements.11479
 as source of trichinosis, control.17922
 spinal anesthesia in.11757
 split ear in, lethal factor.3460
 stomach worms, control.17908
 suckling, confinement as affecting.4408
 transport by rail, after-effects.9799
 trichomonads in facial lesions.1554
 tuberculosis in. (See under *Tuberculosis*.)
 ulcerative granuloma.2697
 vertebrae, variation in number.7139
 vit. A deficiency in.6242
 vit. B requirement.7477, 11010
 vit. D lack, effects.11481
 weaning age, effect on post-weaning growth.15100
 Pigeon. (See also *Columba*; *Dove*.)
 body fat synthesis, thiamine as affecting.9281
 crop-sac response to prolactin, factors affecting.14620, 16589
 development of *Capillaria* in.14193
 equine encephalomyelitis (eastern strain) fatal to.4604
 exptl. trichinosis.8700
 feedstuffs for digestibility.11512
 gastric secretion.9254
 gonads, hypertrophy with yeast extract.7966
 inheritance of silky plumage.12545
 malaria, chemotherapy.11584
 milk, comp.14570
 passenger, data on extinction.5190
 records in Penna.16097
 prolactin.7534
 race, effect on crop-sac response to refractory to *Tryp. evansi*.12259
Salmonella typhimurium var. *copenhagen* in.4444
 trypanosome resistance, temp. as affecting.9911
 visual acuity.9435
 Pigeon-pox. (See under *Pox*.)
 Pigments. (See also *Bilirubin*; *Chlorophyll*; *Color*; *Dyes*; *Hemoglobin*; *Plastid*; etc.)
 anthochlor, chemistry.12101
 anthocyanins, relation to flavones and catechin.6612
 anthocyanin, chemico-genetical relation, plants.12519
 development in *Sorbus* fruit, temp. as affecting.1390
 in flowers and leaves, survey.1404

Pigments (continued)

- anthocyanin (continued)
 occurrence (?) in microorganisms.2758
 precursors, in autumn foliage.15776
 variegation, in *Salpiglossis*.8931
 in asparagus.17396
 astacin, in salmon muscle.6948
 bacterial, black, production requirements.6300
 violet, chemistry.4719
 carotene, assimilation from "poor" Madrassi diet, milk and Ca as affecting.315
 in *Attalea* oil, relation to vit. A potency.10332
 biological value in various fats.3717
 blood plasma increase in, of dairy breeds on pasture.17085
 in carcass fat, distinction from bile.5998
 and carotenes of carrot roots and butter, isolation.5555
 conversion to vit. A₂ fish.11005
 in dairy calf nutrition.9811A
 dehydro- β , as source of vit. A.16509
 destruction in intestinal tract.12911
 detn. in blood.14483A, 16350
 in organs.14557
 digestibility, rat and fowl.320
 effect on:
 arginase activity.9094
 bovine blindness and papillary edema.11004
 erythrocytic glycolysis in cancer.14898
 lipase activity.9095
 vit. A deficiency, Africans.317
 estimation in feeds.13351
 in forage, detn.1412, 13796
 temp. and storage as affecting.8456
 in grass, drying method as affecting.8066
 extraction method.15787
 range, monthly variations.9810
 isolation and extraction, improved method.3092
 in milk, detn.8092
 relation to oxidized flavor.2480
 physical properties.2057
 in ration, relation to oxidized milk flavor.6011, 9812
 stability.11505
 requirement, for poultry.15127
 in silage, colorimetric carotene vs. bipassay.15106
 in soybeans and cowpeas, vars. compared, weathering effects.17731
 in therapy of avitaminosis A.14953
 topical application.16505
 carotenoids, in blood, Dutch E. Indies.316
 detn. in blood.3585
 effect on onset of hibernation, hedgehogs.12834
 in *Epilactis*.3274
 formation in plantain, light as affecting.4947
 in leaves of cereals, amount correlated with developmental period of plant.8576
 in muscle, of salmon.6948
 in pregnancy and lactation, Batavia.318
 in *Rhodotorula*, chemistry.6610
 in sunflower seedlings, relation to size of seed.1403
 synthesis by *Rhodotorula*, aneurin compounds as affecting.6605
 titration by gold chloride.9222
 in tomatoes, changes during ripening.4878
 carotinal, apo-2-, vit. A activity.2055
 changes in catfish.3993
 coproporphyrin, in chronic congenital porphyria.12758
 spectrographic study.8264
 crocin, effect on algal cells.6600
 in crustacean, hormonal control.3935
 cytochrome, of brewers' vs. bakers' yeasts.17401
 detn. in tissues.16348
 effect on tumors and embryonal tissues.13232
 succinate oxidation by, Al, Cr and rare earths as affecting.7267
 u.v. absorption.12711
 oxidation, by colon bacillus in presence of NO₂.12706
 deposits, control in animals.11083
 by temp. and light, lizard.7607

SUBJECT INDEX

Pigments-Pink

- Pigments (continued)
deposits (continued)
in fishes, genetics and neoplastic changes,16854
as influenced by:
light, man,7280
light and darkness, toads,12689
trace elements, *Azotobacter*,17422
ultraviolet,3568
visual stimuli, fish,11122
of eye, in *Drosophila*, *Habrobracon*,
Ephestia, review,12540
Idothea,16682
in feathers of graft hybrids, pigmentoblasts as affecting,8947
flavins. (See *Flavins*; *Vitamins*.)
of flowers and fruits, colors,2996
in hair of different genetic strains, guinea pig,16203
hematin, compounds, u.v. absorption spectra,14578
regeneration, Fe as affecting,14510
hematoporphyrin, effect on comp. of urine,3657
hemin, chem.,12766
effect on:
activity of gonadotrophin,9283
nitrophenol toxicity,14824
rat sarcoma,12322
water-soluble, from blood,12766
hemocuprein, prepn., properties and significance,5509
hemocyanins, mixed molecules from different species,1994
hemosiderin, solubility in reagents during and after fixations,10912
hepatocuprein, prepn., properties and significance,5509
in humus soils, factors correlated with,11964
of insect excreta,12183
in iris, chicken,16678
in leaves, chromatographic method of study,12102
leukopterin, light absorption,12685
in liver, chicken,14584, 14585
in liver and spleen during inanition, *Rana*,4370
of living human skin,15030
melanin as cause of black gums, in Javanese printers,4300
in central nervous system of vertebrates,7944
as indicator in flocculation tests, malaria,6753
natural reversible oxidation-reduction system and indicator,12709
of nerve cells of substantia nigra in primates,15017
production from tyrosine by soil microorganisms,17437
quantitative comparison, in albino series, mouse,1766
spectrophotometric study, mouse,1763
tyrosinase action on, Na benzenonindophenol as affecting,1891
metabolism, aromatic amines as affecting, rat,16444
phaeoporphyrin, chemistry,17729
phenolicine, extraction from *Penicillium phoenicium*,3090
in *Phoma terrestris*,15352
photoxan, production and chemistry,6611
plant, chemistry,6612
in plant extracts, effect on micro-chemistry of sugars,1413
porphyrins, in blood, detn.,7313
chemistry,12748
demonstration,3581
detn.,3595
in urine,2152
effect on erythropoiesis and Hb regeneration,10910
on output of melanophore hormone,9319
in urine, cattle,6233, 6246
isolation and purification, spectrographic studies,8264
rat,16444
sulfanilamide-related drugs as affecting,17274
porphyropsin in fish,13060
producing hair color,11422
production, in grafts of mouse skin on chorioallantois of chick,8053
induced by neural crest grafts, chick,5954, 9770
from tyrosine, by soil microorganisms,17437
protoporphyrin, at high altitude, 10940
pyocyanin, effect on O₂ consumption of *Melanophus* during development,17063
Pigments (continued)
pyrrole-containing, relation to Hb synthesis,10911
respiratory. (See various pigments, e.g., *cytochrome*, and *Enzymes*, *respiratory*; *Flavins*.)
retinal, eyestalk extract as affecting, crustacea,14650
rhodopsin, properties,444
role in biological oxidations,16329
rotterlin, chemistry,15635
in skin, role in production of carcinoma,4179
in sunflower seedlings, size of seed as affecting,1403
in *Tribulus*, wilting as affecting,6549
turacin, analysis,10928
urinary, in alcoholic pellagra,2152
in giardiasis,17920
in pellagra,13028
urobilinogen, detn. in plasma,1982
in stool and urine, values and significance,12728
uropterine, in urine in health and disease,13019
visual purple, mode of action on rod cell,2204
relation to transient orange and indicator yellow,2212
sedimentation constant and mol. wt.,439
xanthophyll, destruction in intestinal tract,12911
isolation and extraction, improved method,3093
Pigment cells, behavior in vitro,13387
chromatophores, cardiac drugs affecting, toad,5761
development in vitro,13387
pituitary control, dogfish,11073
melanophores, drug-expansion, hypophysectomy and, frog,16632
as influenced by:
coramine,2289
hypophysectomy, *Parasilurus*,14656
pituitary extracts and drugs,5650
pituitary and eyestalk extracts, 403
innervation in snake fish,9392
origin in chick,17047
principle in pituitary,12643
regulation by pituitary and adrenal glands, *Anolis*,3986
responses in fish scales,14663
light intensity and, fish,430
relation of pars tuberalis to, frog,3938
size, crustacean eye-stalk hormone as affecting,12643
stimulating substance in blood, liberation by light,12643
physiology, *Amblystoma*,5652
reactions in flatfish,14662
in relation to genetic and specific distinction, fish,12550
Pigmentation. (See *Color*; *Coloration*; *Melanism*; *Mosates*; *Pigments*; *Variation*.)
Pike(s). (See also *Esox*.)
eggs, rhythmic movement during development,15060
Pike perch. (See *Stizostedion*.)
Piktonema (p.1878) *alaskensis*, L. H., injury to spruce, parasites,12209
Pila conica, as interm. host of *Echinostoma*,17911
Pilchard. (See also *Sardinops*.)
biology,143
migration, tagging expts.,9062
Pilea (p.1865) n. sp.,6437
Pileolaria (p.1862) indica, on *Rhus*, 8409
Pilgerodendron (p.1864), in Argentina,15484
Pili nuts. (See *Canarium ovatum*.)
Pilocarpine, bioassay,222
central action,9393
conditioning of salivary secretion, 3743
effect on:
autonomic centers,5759
bactericidal power of blood serum,4561
bronchi,2250
cholinesterase,14661
colon secretion,363
corneal sensitivity,2210
diphtheria toxin action on heart,16809
gastric secretion,9254
after fat inhibition,5583
intestine,7795
iris muscle,4045, 13155
kidney function,13161
male genitalia,16622
muscle, drugs affecting,7813
myotonia, goat,2312
nerve cord of cockroach,16703
nervous system, insects,9562
O₂ consumption at low temp., rat,16770
parotid glands of rat,4852
properties of saliva and blood, dog,18187
salivary flow rate and pH,12643
secretory activity of cutaneous glands, *Rana*,11420
sympathetic ganglia,4139
toxicity of nitro compounds,14824
urea in saliva, horse,14851
vegetative centers, rabbit,14812
visco-elastic properties of lung, 7529
hemodynamic action,18178
intracranially applied,2386, 5775
mydiatic action after sympathectomy,5771
Pimelodella lateristriga, spawning induced by pituitary extracts,5595
Pimiento, growth and distr. of roots,17625
Pinaceae (Gymnospermae), p.1864
Pinanga (p.1864), n. spp. and n. combs.,15487
"Pindang," poisoning by, causes,10053
Pine(s). (See also *Pinus*.)
Benguet, tapping,15623
bunya. (See *Aracaria bidwillii*.)
cultivation in S. Africa,4892
growth, fertilizers as affecting,10263
infested with pine-needle measuring worm, Philippines,1506
injury, due to June beetle, Finland,12301
to *Myelophilus piniperda*,10429
to wood wasp, control,15926
longleaf, forests, soil moisture relations,10250
of Mexico,1284, 10259
resources and exploitation,15661
Monterey, root systems,9023
mycorrhiza, benefits of soil inoculation,8169
needles, chemical changes during aging,17738
needle fusion in,14073
for planting in South Africa,3033
pollen, allergy to,15160
ponderosa, insect pests, California,1509
red, drought resistance, soil nutrients as affecting,15774
mycorrhiza, relation to environment and health of tree,8169
Scotch, chlorosis of seedlings,1447
Dipteron frutetorum on, Ontario, 10432
shortleaf seedlings, growth, mycorrhiza as affecting,10786
sites and soils, Arkansas,1309
summer wood ratio, age as affecting,2917
white, blister rust. (See also *Cronartium ribicola*.)
Ribes eradication, in U.S.A.,1462
wood rot, soil covering accelerating,17337
Pine beetle. (See *Myelophilus piniperda*.)
Pine sawfly, life history and distr., 14128
Pine shoot moth, control,12206
European. (See also *Rhyacionia buoliana* (= *Euetria buoliana*.)
Pine tar oil, to kill ticks and repel screw-worms,5063
Pineal gland, calcification, in malignant hypertension,9527
effect on estrus cycle, rat,16586
extracts, effect on sexual development, mouse,8318
on successive generations of rats,9295
prep. of protein-free,9375
test for hormones in, mouse, 16604
hormones, anthrax prophylaxis by, 6113
of hump-back whale,4333
pineal eye as photoreceptor, *Anolis*,14701
striated muscle fibers in, cattle, 11410
tumor, hypogonadism and,7827
Pineapple, blackrot (*Thielaviopsis paradoxa*), control in transit,6676
fertilizers for,2984
growth rate of fruit, kinetics,6592
N in, when given nitrates and ammonium salts,15767
pink disease (bacterial), etiology and dissemination,1482
rootknot (*Heterodera marioni*), control by predaceous fungi,15874
yellow spot (virus), geographic dist.,6646
Pinene, from *Pittosporum monticolum*, 3051
sensitization to,805
Pinifol, bacterial utilization,2757
Pink tooth, in cow,6233

- Pinna* (p.1872³), functional anatomy of bivalve10560
- Pinnidae* (Mollusca), p.1872³
- Pinnipedia* (Mammalia), p.1883²
- Pinta*. (See under *Dermatoses*.)
- Pintalia* (p.1875³), n. spp.8785
- Pinus* (p.1864²). (See also *Pine(s)*.)
- n. spp. (N).17475
- damping off, as factor in natural dist.10352
- gum analysis, Sumatran spp.4906
- of Italy (N).13721
- new entities,4800
- nomenclatorial note,2827
- phenogeny,2825
- sawly on,14136
- seedlings, soil-fertility requirements,4901
- stomatal anomalies, in seedlings,2911
- strength tests and microscopy of wood,8448
- austriaca*, chemical composition of needles, changes during aging,17738
- caribaea*, growth in South Africa,3033
- cembra*, distrib. in Rumania,15514
- Semasia* damaging, in Switzerland,15909
- excelsa*, twisted fiber in,12009
- halepensis*, as source of resin,15668
- insularis*, affected by *Colocera* n. sp.,4734
- insect pests,1506
- as source of resin,15623
- lambertiana*, *Cronartium ribicola* on,12125
- laricio*, resin impregnation,8446
- as source of resin,15668
- maritima*, nomenclature, leaf anatomy and distr.,15485
- use in afforestation in,15638
- montana*, apical meristem morphology,6446
- distrib. in eastern Alps,8541
- distrib. and silvical characteristics,8541
- v. equisetifolia*, annual flowering form,17658
- monticola*, blister rust (*Cronartium ribicola*), survey of damage by, 8631
- injection of poisons to kill bark beetles,14125
- murrayana*, cultivation in central Europe,4897
- growth in Baden,13986
- thinning methods,18930
- nigra*, varieties and silvicultural importance,10280
- v. austriaca*, range in Germany, 13954
- palustris*, and associated plants, root habits,3510
- forests, fire influence on,7195
- growth in South Africa,3033
- pinaster*, cultivation in France,4896
- effect of superphosphate fertilizer on growth,17657
- as source of resin,15668
- ponderosa*, *Ceratostomella ips* and *Ips lecontei* attacking,12119
- hardiness of needles, relation to composition,3086
- radiata*, regeneration by cuttings, 11999
- resinosa*, introd. sawfly defoliating,14128
- needle blight, etiology of,15803
- volume tables,3021
- rigida*, *Coelosporium veronae* on, 15889
- sabini*, cone variation,17513
- silvestris*, distrib. in Rumania, 13770
- effect of scattered brush on juvenile growth,13958
- germination affected by temp. and moisture,15667
- growth and yield in northern Finland,15650
- insect pests,10429
- mineral deficiency symptoms,1447
- natural regeneration,8524, 15626
- northern Norwegian variety,8519
- pests and destructive agencies of in plantations,15654
- plant succession under, after litter removal,19386
- racial variations,4988
- relation of shade tolerance and drought resistance to seedling survival,3085
- root development on sandy soils, 1312
- silvicultural management of, 15695
- as source of resin,15682
- source-of-seed,3034
- Pinus* (continued)
- silvestris* (continued)
- timber quality in relation to growing conditions, Latvia,15653
- veteran trees in Sweden,13921
- v. monticola*, annual flowering form,17653
- strobilus*, blister rust of. (See *Cronartium ribicola*; *Pine*, white, blister rust.)
- cultivation in central Europe,10269
- introd. sawfly defoliating,14128
- phloem,15517
- reproduction and development conditions,13925
- rootrot, due to *Trametes pini*,14041
- taeda*, growth in South Africa,3033
- seed dispersal,15660
- Pinworm(s). (See *Enterobius* and other genera; *Oxyuriasis*.)
- Piona* (p.1874²), new sp. of,1618
- Pioneer plants and animals. (See *Colonization*.)
- Piper* (p.1865²). (See also *Pepper*.)
- n. spp.,2827A, 2828A, 6429, 6437
- aduncum*, as weed,1197
- Piperaceae (Dicotyledones), p.1865²
- Piperales (Dicotyledones), p.1865²
- Piperidomethyl benzodioxane. (See *Benzodioxane*, piperidomethyl.)
- β -(2-Piperidyl)-ethanol derivatives, as local anesthetics,16818
- Piperine, effect on *Daphnia magna*,4163
- Pipette, calibrator and microaspirator,12739
- for micro detn. of respiratory gases, 7322
- Pipidae (Amphibia), p.1880²
- Pipilo c. erythrophthalmus*, *Dispharynx* from,14217
- Pipistrellus* (p.1882²) *subflavus*, breeding in Penna,5222
- obscurus*, Ontario,5230
- subflavus*, food,7038
- Pipit, distr. and behavior, Belgium, 7031
- Pipunculidae (Diptera), p.1877⁴
- Piranga* (p.1882²) *huey*,1652
- Piricularia oryzae*, cellulose decomposition correlated with pathogenicity,15850
- PIRIFORMA** (Platyh.) (p.1869²) **macro-rhamphosi**,6803
- Piropasma*. (See also *Piropasmosis*.)
- call infected by,2708
- nature and life cycle,15980
- in reticulocytes,12271
- in sheep and cattle,8719
- staining,1584
- gibsoni*, in dogs, pathology and hemocytology,14187
- trautmanni*, in pigs,12246
- Piropasmosis*. (See also genera of *Babesiidae*, e.g., *Piropasma*.)
- in dogs, pathology and hemocytology,14187
- in cattle, Rumania,1546
- in dogs, pathology and hemocytology,14187
- in domestic animals, Rumania,1546
- exptl. reticulocyte infection,12271
- lupinism in relation to symptoms, 11748
- of pig,12246
- Pirotto, Pietro R., biography,10701
- Pisces, p.1879¹. (See *Fish*.)
- Pisidium* (p.1872²), monograph Japanese spp.,6420
- Pisoides* (p.1874²), tax.,1616
- Pistia*, filariasis and,12249
- Pistil. (See also *Carpel*; *Flower*; *Fruit* (morphological); *Gynoeceum*; *Ovule*.)
- phylogenetic study of angiosperms,4810
- stigma, delimitation by H₂O₂ reaction,3459
- Pisum* (p.1866²). (See also *Pea*.)
- auxin gradient in roots, grown in vitro,3066
- exudation in, indoleacetic acid as affecting,4919
- notes on mutants,12537
- sativum*, auxins produced in excised roots of,4918
- chromosome behavior in asynaptic,1704
- chromosome numbers in nodules and roots,49
- cytology of dormancy,8909
- K deficiency as affecting,15697
- P. humile*, hybrid, cytology,5328
- seed germination, enzymes as affecting,12105
- Pit(s), of tracheids and vessels. (See under *Tracheids*.)
- Pithecia* (p.1864²), in Africa,11867
- fellicana*,2834
- Pith, cell shape studies, in *Eupatorium*,17558
- Pithecius*. (See also *Macaca*; *Monkeys*.)
- cyclops*, bile acids,12902
- Pittosporum monticolum*, volatile oil from, composition,3051
- Pituglandol. (See *Pituitary body*, extracts, posterior.)
- Pituitary body. (See also *Acromegaly*; *hypothalamus* and *infundibulum* under *Brain*.)
- ablation, adrenal cortex after, cortin as affecting,3839
- carbohydrate disturbance after, thyroid as affecting, dog,3690
- effect on:
- adrenal, thyroid and testis of rats,2439
- blood bromine, dog,12986
- blood sugar and adaptation to various stimuli, rat,3911
- calorigenic and hypercalcemic actions of vit. D, dog,16588
- carbohydrate metabolism of rat,9194
- adrenal cortex and,12813
- diabetes insipidus, dogs,7895
- diuresis after decerebration, 13027
- gastric mucosa, hybrid dogs, 7968
- genital tract of bitches,14674
- gluconeogenesis in fasting dogs,12643
- growth, gonads, and food intake, toad,3957
- hibernation,14621
- hypercholesterolemia of thyroidectomized dogs,12643
- hyperglycemic urinary principle, depancreatized dogs, 9637
- immunity and hypersensitivity,17181
- insulin action during fever, 14863
- insulin hypersensitivity, dog, 12643
- liver regeneration, rat, 3755, 3819
- ovarian cycle of *Bufo vulgaris*,13045
- ovulation dose, frog,3900
- resistance to trypanosome infection, rat,3882
- response to glycotrophic extracts, rabbit,3876
- sugar absorption in intestine, frog,16565
- uterine excitability,9326
- vagal action on blood pressure,11082
- vagina, dog,14687
- fat-high and carbohydrate-high diet for rats after,14520
- glucose utilization in insulin-treated rabbits after, amino acids as affecting,2026
- hepatic glucose output after, insulin and glycine as affecting, dog,7338
- hyperthyroid splanchnomegaly after,9663
- insulin action after partial,4125
- insulin and ant. pituitary extract after, rat,3689
- maintenance of pregnancy by estrin after, rabbit,7602
- ovary after, prolactin as affecting,12948
- urine of castrate ♀ as affecting,5624, 5625
- permanent diabetes insipidus after,2123
- reticulopenia due to,3886
- simulation by inanition,12643
- somatic, mental and glandular effects, dog,3810
- specific test for melanophore hormone after, frog,5650
- technic,9289, 9353, 12978, 17181
- testes after, testosterone as affecting,5621
- acidophil cells, effect on normal glycemic level, dwarf mice, 7360
- adenoma, chromophobe, clin-path.,11285
- exptl. production,16877
- hist., rats,614
- in pars intermedia, estrin and,5813
- relation to breast cancer, rat, 16834
- adenomatous hyperplasia, in chronic hypoglycemia,14580
- adrenal synergy, carbohydrate metabolism and,12643
- anatomy, reptiles,690
- anatomy and hist., teleosts,5895
- in anthropoids, review,11406
- anuran, effect on thyroid, guinea-pig,374
- basophil cells, hyaline changes in,688
- carbohydrate metabolism and,12643
- 16490

SUBJECT INDEX

Pituitary

Pituitary (continued)

- castration and thyroidectomy cells, estrone and thyroid extract as affecting,3934
- chromatophore control by, dogfish,11073
- control of gonads, *Fundulus*,9345
- Cushing's disease vs. arrhenoblastoma,14956
- cyst, cachexia and,16981
- cytology in gold fish,12511, 13304
- deficiency, as cause of dwarfism,4283
- in differentiation, *Hyla*,8045
- etiology of Simmond's disease, 2405
- hormones as affecting,9658
- denervation, polydipsia and,453
- development, and anatomy in dipnoi,5899
- in chick,9762
- in *Cryptobranchus*,8035
- in domestic fowl,4377
- diabetes insipidus and,12643
- differential staining methods,15043
- disease, vit. A deficiency and,9664
- dysfunction, arteriosclerosis and, blood comp. in,5862
- in deafness, atrophic rhinitis and ozena,4285
- effect on:
 - basal metabolism, man,3887
 - color of lizards,3937
 - gonads of *Rana*,11412
 - metamorphosis and breeding in newt,16058
- epithelial components in teleosts, 16988
- extracts, anterior, adrenotrophic action, effect on carbohydrate metabolism, rat,12985
- in pigeons,12977
- in thyroidectomized and gonadectomized guinea pigs,12984
- assay by liver fat method,3797
- diabetogenic action,3847
-3856, 12643
- effect on:
 - adrenal,5647
 - blood acetone bodies, adrenalectomized rats,12643
 - blood Br. dog,12986
 - blood lipids, rabbit,14690
 - blood picture, rat,12983
 - blood pressure and comp.,378
 - body fats, fowl,12643
 - carbohydrate metabolism, 3874
 -3901, 11064, 11065
 - carbohydrate and oxidation ratios in urine,11066
 - chronic exfoliative dermatitis,9646
 - creatine metabolism,9355
 - cretinism,4291
 - differentiation of adrenal grafts in ant. chamber of eye, rats,5901
 - dwarfism,4284
 - epiphyses and joints, guinea pig,5646
 - fat metabolism,3874
 - frog egg,7543
 - glutathione in blood and liver,14617
 - growth,3880, 9181
 - of cartilage, castration and,9378
 - in thyroparathyroidectomized rats,3908
 - hibernating testis, frog,4343
 - hibernation,14621
 - hypophysectomized rats, insulin and,3689
 - hypophysis and ovary, rat, 3808
 - lactation, cow,7534, 9308
 - metabolism,5609, 9181
 -12643, 14625
 - N excretion, creatinuria and, dog,14625
 - orbital fat in exophthalmos,14973
 - protein metabolism, dog,3880
 -16624
 - spermatogenesis, rat,9362
 - thymus wt., rat,3925, 9363
 - tumor growth,4219
 - electrophoretic studies,11070
 - glycotrophic action,16639
 - identity and mechanism of action,3933
 - insulin effect on sensitivity, rabbit,3876
 - gonadotrophic activity as influenced by:
 - adrenalectomy, rat,12941
 - ageing,12643

Pituitary (continued)

- extracts (continued)
- gonadotrophic (continued)
 - cysteine,14622
 - inaction, rat,12999
 - progesterone, rat,12930
 - ptyalin and trypsin,3861
 - testosterone,12643, 14971
 - thyroidectomy,9698
 - thyroxine, guinea pigs,11404
 - trypsin and dialysis,5449
- antagonist, purification,12946
- trypsin as affecting,12946
- antagonistic effect of intraperitoneal injection on ovary, rat,3820
- assay,5668, 12643, 13178
- extraction methods for, 9122
- on post-partum rabbits, 14623
- with vit. B-deficient rat, 16610
- augmentation with ascorbic acid,9310
- by chlorophyll, hemin, and plant growth hormones,9283
- avitaminosis B₁ and,14940
- carbohydrate in,9342
- chem. differences of follicle stimulating and luteinizing fractions,7541
- effect on:
 - blood P, hen,3855
 - breeding in cattle,16628
 - estrus behavior of anestrus cats,11101, 12643
 - ♀ sparrow,425
 - gonads and accessory sex glands in opossum,16992
 - lactation,9323
 - ovaries,4294, 7585
 - syndrome of infantilism, webbed neck and cubitus valgus,652
 - testicular function and structure in hyperthyroid rats,7971
 - uterus, man,386
 - vagina,12990
- follicle-stimulating, extraction and standardization, 9116
- prep. by use of trypsin, 9125
- fractionation, FSH and ICSH, sheep,16615
- from hog and human as affecting ovary of monkey,11052
- masculinization of ♀ rat by,12643, 12934
- refractoriness and antihormones,12950
- specificity in amphibia,11051
- synergism and antagonism with prolactin, rabbit,12940
- gonadotrophic and thyrotrophic activity, formalin as affecting,5627, 16619
- growth factor, effect on:
 - Ambystoma*,3806
 - blood sugar,9383
 - dwarfism,9635
 - food intake, axolotl,3838
 - gigantism in rats,9305
- as independent of adrenals,11063
- induction of toxemia of pregnancy by, rabbit,9420
- interaction with antigonadotrophic sera,12991
- ketogenic, adrenalectomy as affecting, rat,12972
- prep., assay, and stability, 5645
-11067
- ketonuria due to, succinic acid and glucose as affecting,398
- mammogenic, activity after anol and dihydrotheelin, rabbit,3826
- chem.,2124
- effect on breast,5864
- lactation induced by cortin and, rat,3889
- prep. and assay,9335
- mammotrophin, immunological investigations,16591
- production of permanent diabetes by, dog,5616
- prolactin, action, factors affecting, pigeon,16589
- estrone as inhibiting,14620
- crop-sac assay, pigeon,7534
- and properties of factor antagonistic to adrenalin hyperglycemia,11068

Pituitary (continued)

- extracts (continued)
- proteolytic enzyme action on,12643
- relation to exophthalmos of Graves' disease,11351
- thyrotrophic, action, antagonism of thyroxine and,9294
- thyroxine derivatives as affecting, guinea pig,3859
- assay methods, chick and guinea pig,2119, 3915, 14607
- capacity to produce antisera,9361
- effect on:
 - metabolism, antihormone production and, rabbit,16621
 -14615
 - factors affecting, thyroid and, sparrow, 5642
 - N metabolism, frogs,9331
 - extraction, clin. importance,14966
 - fatal hyperthyroidism due to,14646
 - refractoriness to, factors affecting,14614
 - ultracentrifuge studies of gonadotrophic and,3913
- posterior, absorption spectrum, 9285
- antidiuretic augmentation by various substances,16625
- assay method using depressor responses of fowl,12942
- effect on:
 - arterial tone,13118
 - blood pressure of hens,9385
 - blood sugar,3914
 - ciliary motion, frogs,7550
 - diabetes insipidus, vs. salts,9659
 - phenobarbitalized heart,9525
 - salt output and diuresis, rat,14633
 - water balance, frog,5611
 - water retention, frogs,9282
- pH stability curves for oxytocic, vasopressor and antidiuretic principles,16611
- oxytocic principle, assay error,5622
- chem.,13178
- fate,13178
- pitressin, effect on:
 - circulation in limbs,5722
 - diabetes insipidus,14965
 -14980, 14981
 - renal blood flow and clearance,11086, 12643
 - serum electrolytes and water exchange in diabetes insipidus and adrenal insufficiency, cat, 12643
 - sham-drinking, dog,3672
 - gastric ulcer production by, 2106
 - gastro-intestinal hemorrhage from, dog,12643
 - intracutaneously applied,2336
- pituiratin, effect on:
 - body water, fish and reptiles,11048
 -14609
 - frog,9340
 - uterus, androgens as affecting,14610
 - water loss, rat, guinea pig, fowl,14610
 - rate of absorption, Zn salts as affecting,16592
 - polarographic investigation, 12994
 - pressor and oxytocic, chemistry,9374
 - pressor principle, effect on oxidase system,9299
 - path. action, review,12971
 - uterine response to, Mg as affecting,9301
 - vasopressin, effect on anesthesia,4169
 - use in detection of preeclampsia,9422
- of fence lizard, cyt.,9690
- fibrosis, pluriglandular insufficiency and, vs. Simmond's disease,5853
- after gonadectomy, testosterone as affecting,7964
- hormones, anterior, age and sex differences in, rabbit,9369
- antidiuretic, novasurol and water intake as affecting, rat,14632
- anti-gonadotrophic, study,3832
- diabetogenic action of various, dog and toad,3886, 3837

Pituitary (continued)

- hormones (continued)
 glycothropic, effect on liver, frog, 12963
 gonado- and thyrotrophic activity, formalin as affecting, 16619
 gonadotrophic, activity as influenced by:
 androgens, 3793
 estrin, 3794
 FSH, LH and, 14619
 season, rabbit, 14624
 splenectomy, 12643
 adrenotrophic and, fowl, 5640
 from chorionepithelioma, 9640
 content throughout life of rat, 5638
 ovariectomy, as affecting, 16618
 detn. in sera, 7600
 extraction from pregnant mare blood, 10870
 factors controlling release, sparrows, 13046
 in placenta, 2165
 synergy with pineal extract, 3818
 zoological specificity, amphibia, 14675
 intermedin, distr. in fowl, 12964
 lactogen, in lactating rat, 2168
 lactogenic, content during growth of guinea pigs and rabbits, 12959
 -like, masculinization of ♀ rats by, 9312
 melanophore, effect on metabolism, 9377
 flatfish, 14662
 hypophysectomized frog as test for, 5650
 metabolic principle vs., rabbit, 3878
 output, porphyrins as affecting, 9319
 study, 12643, 13178
 tumors as affecting, 4221, 4222
 in vitro test for, 9299
 melanophore-dispersing, rôle in color changes of catfish, 2182
 melanophore-expanding, eyestalk extracts and, 403
 light and darkness, as affecting, toad, 12689
 metabolic, ketogenic and glycolytic effects, 12643
 production, inanition as affecting, rat, 3975
 prophylaxis of anthrax by, 6113
 test of the two gonadotrophic hormone theory, rat, 3910
 thyrotrophic, action in hypophysectomized mice, 3815
 excretion, cervical sympathetics as affecting, rat, 16635
 in various diseases, 4271
 during growth and reproductive cycle, rat, 14648
 as influenced by:
 CO, 12969
 cold and section of pituitary stalk, rats, 12995
 vit. B lack, 7967
 14939, 14951
 hyperfunction in acromegaly, 16938
 in colloid tumor of third ventricle, 16873
 hypofunction, rôle in obese children, 16819
 in underweight patients, 14967
 -hypothalamus adiposity, analysis of lipids in rat, 12643
 implantation, effect on *Triturus*, 9357
 of glandular lobe in *Bufo*, effect on oviduct, 7963
 in infants of diabetic mothers, 4286
 as influenced by:
 adrenal gland, 9639
 antihormone treatment, 3972
 diethylstilbestrol, rat, 3877
 estrogens, 3884, 3888, 5808, 9279
 9639, 16980, 16990
 irradiation in diabetes, 10861
 sterile monkey, 202
 light and darkness, rat, 9298
 nicotinization, guinea pig, 14642
 pituitary extracts, cyt., 15024
 rachitogenic diet, rat, 3873
 sex hormones, rat, 11061, 11062
 suckling and injections, 14639
 testosterone, 2121, 3890
 innervation, man, 7956
 melanophore regulation by, *Anolis*, 9386

Pituitary (continued)

- melanophore stim. due to pituitrophic drugs, frog, 16632
 neurohypophysis, structure and function of parenchymatous glandular cells, rat, 9692
 in obesity, rat, 14963
 pars intermedia, activity, infundibular lesion and, tadpole, 448
 pars nervosa, secretory cells, 7669
 pars tuberalis, relation to melanophore response, frog, 3938
 pituicytes, occurrence and secretory nature, vertebrates, 5398
 posterior, ablation, acetylcholine anti-diuretic effect after, 7557
 adrenal and, effect on fluid metabolism, rat, 7538
 diabetes insipidus due to, recovery from, rat, 397
 adrenalectomy as affecting output of anti-diuretic substance in urine, cat, 12974
 anti-diuretic activity, dehydration and hypothalamus, as affecting, 16614
 oxytocic principle, release by vagal stim., dog, 3800
 study, rabbit, 3833
 prep. of dried powder, 3823
 pressor principle, hypothalamic stim., as affecting cat, 16599
 rôle in maintaining water balance, 12998
 secretory granule exhaustion and recuperation after vagal pressor response, 11077
 water diuresis and, 16036
 relation to masculinoblastoma of ovary, 11299
 review, 7244, 7245
 rôle in calorogenic action of vit. D, 12643
 in color control, catfish, 14656
 in development and lactation, cytology, 11413
 in insulin sensitivity, 379
 in maintaining water balance, 12998
 secretion in parabiotic rats, anti-gonadotrophic sera as affecting, 5631
 stalk section, effect on endocrines, mammals, 3929, 3930
 3931, 12995, 13034
 structure, changes in ♂ rats on diets with and without vit. E, 15021
 Indian elephant, 15026
 subtotally hypophysectomized rats, hist., 2440
 thrombotic necrosis, puerperal, 16927
 tissue, iodine in, 2117
 of toads in light and darkness, hist., 15022
 transplantation between spp. of *Ambystoma*, 9281
 urine secretion control by, 3951
 vascular supply, 9685, 18295
 Pituitrin. (See Pituitary body, extracts, posterior.)
 Pituitrophs (p.1880*) *catenifer*, attacking ground squirrel, 7038
 Pitymys (p.1882*) *pinetorum*, in Minnesota, 18105
scelopoides, life hist., 5231
 Pithyophthorus (p.1876*), on *ponderosa* pine, control, 1509
glabratus, on pine, loss due to larvae, 10429
 Pityrosporum ovale, cultural characters, 17323
 PLACELLA (Fungi) (p.1863*) *fraseriana*, on *Aristida*, 8407
 Placenta (animal). (See also Parent-offspring relationship.)
 acetylcholine in, during pregnancy, rabbit, 14685
 blood coagulation factor in, 7332
 blood in fetus and, sheep, 7576
 correlations of area, wt. and wt. of baby, man, 11098
 effect on corpora lutea gravida and vaginal cycle, guinea pig, 14682
 estrogens in, in hydrops fetus universalis, 2170
 isolation, 3928
 man, 3879
 extract, effect on syphilis (exp.) course, 8121
 histamine in, 7583, 12683
 hormones, 2165
 in delayed pregnancy, man, 9428
 immunity transfer via, 6098, 9905
 9906, 9907
 inflammatory cells in, significance, 2168

- permeability, to antigens and antibodies vs. iodine, 8146
 to hormone I, man, 9423
 to polonium, 5427
 to reaginic serum, monkey, 11095
 to ricin, 9414, 12643
 to sulfamide preps., 12638
 to sulfanilamide, man, 427
 to ventriculi, rat, 3961
 praevia in rhesus monkey, 17043
 sources of intrauterine bleeding, rat, 18050
 as tissue-culture medium for viruses, 13576
 in viviparous snake, 7599
 Placenta (plant). (See Carpel; Pistil.)
 Placentation, in *Citellus*, 4381
 Placimminin, effect on syphilis (exp.) course, 8121
 Placodiscus (p.1866*), n. spp., 2843
 Placopsilinae (Protozoa), p.1868
 Placophaeria (p.1862*), tax., 15464
 Placunopsis (p.1872*), n. sp. (J), 15943
 Plagiodera (p.1876*) *versicolora*, parasitized by *Schizonotus sieboldi*, 10447
 Plagioporus (p.1869*), n. spp., 6803
 Plagiorchiidae (Platyhelminthes), p.1870
 Plagiorchis (p.1870*), incidence in poultry, Scotland, 6749
 potanini, in *Larus pipizicans*, 17942
 Plagiotenopterina (p.1877*), n. sp., 14254
 Plagiotomidae (Platyhelminthes), p.1869
 Plagiorchiaceae (Bryophyta), p.1863
 Plagiothecium (p.1863*) *argyrophylum*, tax. and geography, 6371
 Plagiotomidae (Protozoa), p.1868
 Plague. (See also Pasteurella pestis.)
 cattle. (See Rinderpest.)
 chemotherapy, 17243
 control, epidemiology and, Java, 10027
 organization in Brazil, 13637
 fowl. (See Fowl plague.)
 preventive measures, China, 11718
 in Fukien, 10081
 rat as carrier, in coal mine, 8800
 serodiagnosis by anti-envelope precipitin serum, 13441
 rat and flea survey in Fukien, 13660
 reservoirs, 13637
 rodents as, control, 1004
 rodent infection by flea bites and feces, 8290
 rodents susceptible to, Tunisia, 999
 sanitary survey in China, 8316
 studies in China, 8315
 survey, Brazil, 13637
 swine. (See Hog cholera.)
 sylvatic, epidemiology, 6214
 predatory and scavenger birds in, 15311
 survey in Canada, 11689
 vector control, 1004
 transmission by fleas, 8290
 Plagydontidae (Pisces), p.1879
 Plaice. (See also *Pleuronectes platessa*.)
 growth rate, 1864, 1865
 in Baltic, 1871
 Planaria. (See Turbellaria.)
 Planaria (p.1869*) *lugubris*, regeneration expts., 11465
schischkovi, regeneration in, 17064
 Planariidae (Platyhelminthes), p.1869
 Plane trees. (See Sycamore.)
 Planesticus m. migratorius, new sp. of tape-worm from, 12296
 Planimeter, method of measuring tree volume, errors in, 13926
 Planipennia (Neuroptera), p.1875
 Plank, Elisha Newton, biography, 12477
 Plankton, in abandoned granite quarries, 14401
 algae, in drainage ditch, 4782
 in Windermere Lake, production, 5398
 of artificial alkaline lake, 13723
 of Australian coast, production, factors affecting, 12631
 of bog lake, Michigan, 1856
 in Bristol Channel, Great Britain, 10797
 communities, ecology, 5391
 density, in relation to occurrence of O₂ minimum layer in seawater, 3521
 diagnostic of sub-Arctic and Atlantic waters. (See also Diatoms.) 14895
 fossil, Finland, 2782
 population fluctuations, 16271
 diurnal vertical migrations, 9041
 fresh water, in ponds of Jugoslavia, 9045
 indicators of water movements and biological conditions of North Sea, 16273

SUBJECT INDEX

Plankton-Plant

Plankton (continued)

- lake, Austria,10803
- British Columbia,5400
- seasonal and annual variation, 139
- Connecticut,3524
- Germany,9047
- Washington,3525
- of Lunz Lake in relation to water transparency,1354
- migrations, in fjords of Greenland, 7221
- nano-, fertility and variations in abundance in relation to climate,16270
- nets, automatic,14403
- clogging, effect on sampling expts.,16272
- of North Sea, chem. and biological comp., seasonal variation in,12607
- of North Sea and English Channel, 1848
- pelagic, quantitative sampling,138
- phyto-, abundance, factors affecting, Lake Michigan,1851
- of fresh waters,137
- of Gulf of California,134
- of Gulf of Maine, survey,135
- number of spp. in relation to water temp., California,14397
- production, net yield samples as criterion, critique,7220
- quantitative estimation, critique of method,5390
- Rhizosolenia* as bar to herring migration,147
- vertical dist. of marine,14396
- of west Greenland,3519
- of Portage and Base Line lakes, quantity and seasonal variation, 5395
- production, fish production and, inter-relationship,16283
- in ponds, fertilizers as affecting,16284
- productivity in Tennessee waters, 5396
- protozoan, as indicator of stream pollution,993
- relation to seasonal abundance of young fish,10813
- river, number and changes due to formalin preservation,136
- samples, fat content,5412
- of Scottish waters,10794
- seasonal occurrence of mysids off Plymouth,1350
- zoo-, analyses of P, N, Fe, and Mn in marine,10792
- of ponds of lower Rheinland,9049
- quantitative study of saline lagoon, England,9042
- zoo- and phyto-, diurnal variation in feeding and reproduction,5393
- Planoceridae (Platyhelminthes), p.1869²
- Planorbis exustus*, *Schistosoma spindale* cercariae in,1544
- Plant(s). (See also *Aquatic plants*; *Botany*; *Crop*; *Galls*; *Periodicity*; *Phylogeny*; *Physiology*; *Poisonous plants*; *Quarantine*; *Succession*; *Taxonomy*.)
- anatomy, comparative,2905
- relation of leaf trace, branch and stem, *Salix*,17559
- reprint of Hooke's *Micrographia*, 19
- of Assam, larvicidal action,12223
- associations. (See *Communities*.)
- biennial rôle of hormones in,8571
- breeding. (See also *Hybrids*; *Hybridization*;) and under the various crops,)
- arrangement of plants,12615
- barley, for amylase activity,1199
- canning peas, Wis.,15535
- cereals, relation to yield,11933
- crysanthemums,4871
- Citris*, nucellar embryony, and juvenile characters in clonal vars.,1745, 1747
- P. I.,17638
- coconuts,8494
- corn hybrids, effect on corn borer,8644
- cotton,6492, 17567
- flax, Morocco,2950
- fruit trees, incubator technic,3005
- grasses,6484, 6493
- muskmelons,8503
- oats, for practical value,12533
- onions,1246
- pears, Great Britain,1263
- potatoes, history in U.S.A.,11946
- Prunus*,8507, 11932A
- red raspberries, for resistance to *Amphiphora*,8637
- relation of chemistry,8925
- selection for insect resistance,8930
- statistical problems, sugar beet, 1757
- of subtropical ornamentals and fruits, Fla.,8495

Plant (continued)

- breeding (continued)
- sugarcane, S. Africa,13805
- sunflowers,15565
- sweet corn, methods and records,15594
- sweet potatoes, La.,17592
- technic, no. of top-crossed corn plants needed to represent a variety,2958
- propagation of forage plants by cuttings,10306
- and recent results, peaches,5314
- use of greenhouse tests in,15554
- of juvenile leaves in comparing plants,15747
- wheat, blending vars.,15538
- winter legumes,13819
- chemistry. (See under *Chemistry*; *Plant tissues*.)
- classification in relation to mode of distr.,7208
- Cu in, soil and fungicide content as affecting,15405
- cultivated, history,3053
- for honey production, Norway, 8671
- diseases. (See also *Parasite*; *Parasitism*; *Phytopathology*.)
- allelopathy, effect of one plant on another,8632
- bacterial classification,6637
- Dieffenbachia* leaf spot,3169
- of *Lespedeza* spp.,3169
- taxonomy and nomenclature of bacteria,6299
- of bananas, Formosa,1420
- of blueberries, Mass.,17622
- of cacao, New Guinea,13879
- of canning peas, Wis.,15535
- control. (See also *Fungicides*; *Dusting*; *Insect pests*; *control*; *Insecticides*; *Spraying*, etc.)
- extraordinary methods, review,5008
- handbook,10378
- crimson clover, U.S.A.,2939
- of elm, report of committee investigating,1759
- environmental relations, in bacterial canker of stone fruits, 14056
- of *Fusarium* footrot of asparagus,14050
- in *Fusarium* wilt of cotton, 4996
- in *Helminthosporium* rootrot of wheat,14080
- light as affecting,17822
- nutrition, rôle in wheat rootrot,8623
- of oat crown rust,15848
- of *Phymatotrichum* rootrot of trees,14100
- temp., effect on:
- gardenia chlorosis,8621
- leaf-rust of wheat,15842
- wheat stem rust,3169
- of fruits, handbook,8633
- host-parasite relations, in apple fire blight,15863
- in bacterial knot of olive,12146
- in bean rust,5004
- in black scurf of potato,15879
- in crown gall,10856
- in cucumber downy mildew,1449
- in *Cuscuta* and *Orobanchae*,15817
- in *Exobasidium* gall on *Camellia*,15841
- of *Fusarium* footrot of asparagus,14050
- in onion rootrot,1450
- rôle of osmotic pressure and permeability,15862
- in virus diseases, review,3124
- insect dissemination. (See *Insects*, as vectors.)
- of kapok, E. Africa,4828
- of market fruits and vegetables, handbook,17848
- of mushrooms, Holland,2981
- nematode, of Libya,8607
- nutritional relations. (See also *Mineral nutrition*, *plant*; *Nutrition*, *plant*.)
- occurrence, in Cayman Islands, 1461
- in Italy,17487
- in Japan,5012
- in Nigeria,12169
- in relation to clonal types of economic plants,3169
- of ornamentals, California,1482
- handbook,14098
- physiologic specialization, in barley rust,6628
- in bean rust,17812
- in cereal rusts, Württemberg,15854
- in *Phragmidium* on *Rosa* spp., 1453

Plant (continued)

- diseases (continued)
- physiologic specialization (continued)
- in *Phytophthora cactorum*,17746
- in potato scab,6870
- in *Rhizoctonia*,15855, 17752
- physiological, effect on bulb mite injury in *Lilium*,10412
- Phytophthora* spp., pausing, Japan,4966
- research, review,3168
- resistance, acquired, negative expts.,17809
- to potato virus X,3181
- action of higher plants and fungi on bacteria,8624
- alkaloids as factors in, 4989, 15849
- in *Antirrhinum* to rust,3169
- in apple and cherry to brown rot,10368
- in apple to *Gymnosporangium*, 3141
- in apricot to brown rot,14079
- to bacterial leafspots,17815
- in barley, to stemrust, etc.,6674
- in bean rust, environmental factors as affecting,5004
- breeding for,8934
- in cowpeas,17817
- in cucumbers, to downy mildew,66
- in horticultural crops, to root knot,15843
- in oats,1205, 1206, 15845
- in onions,1246
- in raspberry to mosaic,15860
- in trees,8934
- in wheat,4993, 15846
- in cereals, to *Puccinia glumarum*,3138
- in corn, to bacterial wilt,1727
- hybrids and vars.,15536
- in cotton, to bacterial leafspot, rôle of bacteriophage,4971
- to *Bacterium maltacearum*, genetics,16173
- in currant, to *Cronartium ribicola*,8137
- in elms, to *Ceratostomella*,4998
- of grasses, to Hessian fly,17872
- as influenced by:
- fertilizers,15844
- nutrition,17819
- K salts,14087
- previous inoculation,17816
- soil fungi,12144, 17821
- inheritance, in bean anthracnose,8169
- in potato to scab,1739
- in potato to virus X,10362
- of raspberry to mosaic vectors,8637
- in Viking currant to *Cronartium*,12145
- in wheat to bunt,12150
- in leguminous crops to *Erysiphe polygoni*,17814
- in *Melilotus* to *Phytophthora*, 17816
- in mello to *Pythium* rootrot,14081
- in oats to crown rust,15848
- open vs. self-pollination, as factor,17823
- in peas to *Fusarium* wilt,17825
- possible source in Chilean tomato,5816
- in potatoes to scab, var. tests, 1452
- to wart disease (*Synchytrium*),65, 13834
- in *Pyraecantha* to fire blight, 15863
- review,15837
- in *Ribes* to *Cronartium ribicola*,15851
- to root knot, nature,6665
- in *Solanum* spp. to *Actinomyces*,14084
- in sugar beet,12159
- to curly top,1482
- in tobacco, to curly top virus, 15864
- to *Thielavia*, factors in,4992
- to virus 1,3169
- in tomato, to rootknot and *Fusarium* wilt,17826
- in wheat, to *Puccinia triticea*,3456
- to stemrust,14083
- in wild-sugar beet hybrids,12539
- of rice, U. S. A.,13816
- seed-borne, detection in seed, analysis,1473
- manual for detn.,12163
- of *Melilotus*,1422
- reduction by soil microorganisms,1464
- seed testing in relation to,1480
- of snap beans, S. C.,17584

Plant (continued)

- diseases (continued)
 soil borne, infection conditions, re-
 view, 3140
 of sugar cane, Hawaii, 3165
 of vegetables, handbook, 3167
 virus. (See also *Viruses, plant*)
 bibliography, 14066
 book, 8209
 of celery, 3132
 handbook, 10360
 host-index, 14059
 of lilies, 4977
 list occurring in China, 12141
 of Narcissus, thrips as vectors, 8796
 new, of avocado, 12138
 of cabbage, 4980
 of cassava, 1443
 of celery, 17778
 of cherry, 3169, 17732
 of citrus, 1432
 of currant, 10359
 of grapes, 3169
 of *Mathiola incana*, 4981
 of narcissus, 17779, 17785
 of oats, 17791
 of papaya, 14067
 of pea, 3169
 of pear, 3169, 6654
 of potato, 1477
 of radish, 6659
 of *Tabebuia*, 14061
 of tobacco, 3133
 of tomato, 6655
 of trees, 3169
 of *Vicia faba*, 12140
 nomenclature, 12133
 resistance to vectors in raspberry, 8637
 review, 1441, 8614
 in tobacco, isolation and properties, 8211
 review, 8211
 ring spot, conc. and properties in
 recovered plants, 15831
 dispersal, methods, 7208
 distribution. (See *Phytogeography*; and
 also see the Geographic Index,
 p.1884.)
 economic. (See also *Ethnobotany*; *Medi-*
cinical plants; *Fiber plants*; *Food*
plants; etc.)
Aconitum spp., as use in hunting, 8559
Agave as, 5271
 beverages from, U. S. A., 12018
 books, 3417, 8885
 of Burma, algae, 3048
Garcinia atrovirens as, 11983
 of India, 1159
 for oils, tobacco as, 3043
 seaweed as, 3044
 sedges as, for making paper, 1194
 structure, book, 1170
 flowering, chromosome numbers, Great
 Britain, 16158
 fossils. (See also *Paleontology*; and
 also see *Geological Index*, p.1893.)
 in ground sloth dung, Arizona, 7048
 vascular organization and method of
 study, 4722
 geography. (See *Phytogeography*; and
 the *Geographic Index*, p.1884.)
 growth forms. (See *Life forms*.)
 growth hormones, review, 14440
 higher, cytokinesis, chromosome num-
 bers, 7105
 introduced, Netherlands Indies, spp.
 recommended, 17598
 juice. (See *Sap*.)
 for lac culture, India, 14102
 Mn in, function, 9168
 mean net assimilation, ecological sig-
 nificance, 7194
 nutrition. (See *Nutrition, plant*; *Mineral*
nutrition, plant.)
 pests. (See also *Insect pests*.)
 occurrence, in Cayman Islands, 1461
 phanerogamic parasites. (See also un-
 der the various parasitic plants,
 e.g., *Dodder*, *Mistletoe*; and un-
 der the genera, e.g., *Cuscuta*.)
 phosphoric acid esters in, 3584
 protection, handbook, 10378
 residues, cellulose decomp. by fungi and
 actinomycetes in, 11784
 decomp. transformations in, 17423
 hypochlorite oxidation, 17482
 thermophilic decomp. in composts, 8350
 seleniferous, poisoning of livestock by
 general account, 15092
 sociology. (See *Communities*.)
 tissues. (See also under specific plant
 parts, e.g., *Leaf*, *Root*, *Stem*.)

Plant (continued)

- tissues (continued)
 differentiation, effect on intercellular
 relations, 17560
 tumors. (See *Tumors, plant*.)
 utilized by deer, Arizona, 7243
 vascular, evolution and phylogeny,
 vit. C in, book, 2905, 10680
 Kon's Ag reaction and, 2072
 Plant lice. (See *Aphididae*.)
 Plantaginaceae (Dicotyledones), p.1867²
 Plantaginales (Dicotyledones), p.1867³
Plantago (p.1867³), spp. correlation of
 characters within a population, 15482
carinata, in France, 17514
indica, in California sand dune, 4802
 Plantain(s). (See also *Plantago*.)
 pollen, cross-seroreactions with, 11525
 water storage and pigment formation,
 light as affecting, 4947
 Plasma. (See *Blood, plasma*; *Cytoplasm*;
Protoplasm.)
 Plasmal, detn. in lipid mixtures and
 organs, 16340
Plasmiorchis (p.1870⁴), syn, 6788
 Plasmodium, in avian malaria, 11590
 effect on *Plasmodium*, 15183
 in malaria therapy, 1558, 6144, 9930
 clinical data, 9939
 test for, 3590
 Plasmodemes, in algae, 8377
 anatomy in sieve plates, 10166
 in *Cuscuta* and *Orobanchae*, 15817
 in Cyanophyceae, 1067
 in phloem of conifers, 15517
 Plasmodiidae (Protozoa), p.1869¹
Plasmodiophora brassicae, on crucifers, soil
 amendments as affecting, 3169
 Plasmodiophoraceae (Fungi), p.1861²
Plasmodium (p.1869³), (See also *Malaria*.)
 tax., 1588, 8722
A. stephensi, malarial free race, 12226
 of anthroids, specificity, 12264
 asexual development, hemotropic vs.
 histotropic, 8707
 avian spp., relation to *Toxoplasma*, 1578
 in birds, vector, diagnosis, and con-
 trol, 6733
 chemotherapy of infections by spp., 6144, 11583, 11581
 in children, Sierra Leone, 14185
 demonstration by fluorescent dyes, 11575
 exoerythrocytic schizogony, in, 10499
 vs. *Toxoplasma*, avian malaria, 15966
 immunity relations, 8169
 incidence, wild birds, 17901
 infection in hens, pathogenesis, 7862
 infection rates, *A. subspicatus* and *A.*
vagus, India, 10442
 as influenced by atabrine and plas-
 modium, 15210
 life cycle in mosquito, 17904
 malarial spp., number, vs. severity of
 fever, 14188
 natural infection rate of anophelines, 12219
 oocyst and sporozoite rates, in *A.*
gambiae, 8663
 selectivity for reticulocytes, 12271
 serodiagnosis of human malaria with
 antigens of spp., 6128
 in sparrows, 8711
 speciation and races in, 1588
 sporozoites in human tissues, 5088
 strains, for paralysis therapy, human
 passage as affecting, 8710
bubalis, morphology, 14201
cathemerium, asexual development, 8707
 asexual periodicity, factors affecting,
 atabrine as affecting, 10510
 chemotherapy of infection by E-
 stage, 11590
 cross-immune relations of strains of
P. relictum and, 11571
 effect on body temperature, canary,
 exptl. erythroblastosis as affecting,
 canary, 10498
 multiple infection in red cells,
 canaries, 1555
 passive immunization to, 943
 in patent period, relations to young
 red cells, 6784
 rate of reproduction, 10481
 reproduction, quinine and plasmodium
 as affecting, 15183
 in reticulo-endothelial cells, canaries,
 6792

Plasmodium (continued)

- cathemerium* (continued)
 splenic infarctions and, canary, 17899
 staining in tissue sections, 10491
 transmitted to *Cyanocitta*, 3257
circumflexum, asexual cycle, exoerythro-
 cytic stages, 10499
 life history and immunity relations,
 cynomolgus, effect on spleen, 12243
elongatum, asexual development, 8707
falciparum, atabrine effect on gameto-
 cytes of, 8187
 biology, 15949
 chemotherapy, 13549
 endemic in E. Africa, 6759
 in healthy children, 8709
 incidence in Ital. E. Africa, 14184
 incidence, Somaliland, 8686
 mosquito infection from malaria cases,
 as influenced by chemotherapy, 9915
 prophylaxis of infection, by certuna,
 6153
 quinine effect on gametocytes of,
 resistance acquired by infection, com-
 parisons, 15178
 superinoculation with *P. vivax*, 8169
 unpigmented cycle, 15952
galkinaceum, asexual development, 8707
 exoerythrocytic forms, origin, 12254
 exoerythrocytic stages, Feulgen re-
 action in, 6758
 in reticulo-endothelial cells, chickens,
 6722
immaculatum, virulence, in Europe and
 Africa, cause, 8717
 Roman vs. Ethiopian strains, 10504
quotidianum, validity of sp., 8717
knowlesi, antibody production to, 13532
 antigen in sera of infections, 8170
 complement-fixing antibody produc-
 tion without immunity to,
 13593
 effect on spleen, 12243
 free from red cells, infection expts., 15953
 immunity to reinfection after sulf-
 anilamide therapy, 13536
 immunization to, in monkeys, 6129
 as influenced by sulfanilamide, 15211
 latent infection, as influenced by yel-
 low fever vaccination, 15154
 lesions, in monkeys, 6747
 serodiagnosis of human malaria with
 antigens of, 6128
 sulfapyridine as affecting, 15185
malariae, immunity relations, 12245
 incidence, Somaliland, 8686
nucleophilum, from *Progne*, 3257
ovale, immunity relations, 12245
 latent infection, as influenced by yel-
 low fever vaccination, 15154
 natural resistance to, 14190
 in negroes, in endemic malaria re-
 gions, 8709
 resistance acquired by infection, and
 comparisons, 15178
perniciiosum, as variety of *Pl. immac-*
ulatum, 8717
praecox (*Pl. relictum*), 8722
relictum, in penguins, exptl. studies,
 12265
reichenour, in chimpanzees, 12264
relictum, asexual development, 8707
 cross-immune relations of strains of
P. cathemerium and, 11571
 effect on body temperature, canary,
 from Nebraska birds, 10493
 var. *matutinum*, asexual periodicity,
 factors affecting, 10510
tenuis, validity of sp., 8717
vivax, in erythrocytes vs. reticulocytes,
 17921
 exptl. infection of anophelines, 5090
 immunity relations, 10490
 incidence in Ital. E. Africa, 14184
 incidence, Somaliland, 8686
 indigenous vs. foreign strains, sus-
 ceptibility to, 1548
 intensity of infection after repeated
 use of infected mosquito,
 14163
 morphology in thick and thin blood
 smears, 8716
 protracted incubation period, 5086
 resistance acquired by infection, com-
 parisons, 15178
 superinoculation with *P. falciparum*,
 8169

SUBJECT INDEX

Plasmolysis-Pneumothorax

Plasmolysis. (See also *Osmosis*; *Permeability*.)
 forms, *Helodea* spp., 6581
 of plant cells, effect on cold resistance, 3087
Plasmodium vivax, overwintering mycelium of, 17829
 Plasmosin, gels and fibers formed by, 173
 Plasmosome. (See *Nucleolus*.)
 Plastid(s). (See also *Chloroplasts*; *Mitochondria*; *Pigment cells*.)
 inheritance in *Eu-Oenothera-Onagra* hybrids, 1103
 variegation, in *Salpiglossis*, 8931
 Plat(s). (See *experimentation* under *Agriculture*; *Horticulture*.)
 Platanaceae (Dicotyledones), p.18654
 Platandria (p.1876), n. sp., 6867
 Platanus (p.1865), leaf-spot fungi, culture media for, 17495
 persistence of foliage, light and temp. as affecting, 4942
occidentalis, atavistic leaf forms, 11853
Platococcis (p.1877), n. sp., 6934
 PLATONAX (Hom.) (p.1875), n. sp., 8785
Platonic (p.1876), n. spp., 6867
Platyachus (p.1876) *ruralis*, on cocoa, 14107
Platyarthrus (p.1873), color variations, 12328
 eye structure of blind spp., 5126
schöbli, redescribed, tax., 12386
Platycarya, wood anatomy, 17527
Platycephalidae (Pisces), p.18802
Platycephalus spp., psittacosis in, 954
Platyterium (p.1868), n. sp., 1097
 † *Platycheirus* (p.1877), n. sp. (N), 3373
Platydorina (p.1860) *caudata*, in Minnesota, 1071
Platyedra (p.1877) *gossypitella*. (See *Pectinophora g.* (= *Gelechia g.*))
 on cotton, Sao Paulo, 12198
 population, climate as affecting, 3184
Platygeomys (p.1882), n. spp. and n. sub-spp., 7039
Platyhelminthes, p.18692
 preparation, Dammin's method, 1599
 PLATYMYNTISPA (Neur.) (p.1875), homonym for *Anisoptera*, 12409
 PLATYNOTICERAS (Moll.) (p.1872) (J), 8742
 PLATYOPHYYS (Mamm.) (p.1883), 5235
 Platyphylline, toxicity, 18178
Platyphocellus maculatus, effect of thyroid feeding upon growth, 12956
Platysemon (p.1865) *californicum*, anatomy, 11884
 Platysomidae (Pisces), p.18792
 Platystomidae (Coleoptera), p.18763
 PLAXOCERINUS (Echin.) (p.1871) (Cb), 10555
 FLEBEIA (Hym.) (p.1878), subg. of *Trigona*, 6928
 † *Plecta* (p.1877), n. sp. (N), 3373
 Plectoptera, p.18752
Plecostomus plecostomus, in reservoirs, 12417
 spawning induced by pituitary extracts, 5895
Plectoderes (p.1875), n. sp., 8785
Plectognathi (Pisces), p.18804
Plectridium (p.1861) spumarium, cellulosic form from sugar refinery scum, 18678
Pleiospermium (p.1866), n. sp., 18761
Pleocoma (p.1876), spp. tax. note, 6881
Pleorchis (p.1870) *sciaenae*, 6808
Pleospora (p.1861), n. sp., 15453
lycopersici, pathogenicity to tomato and clover, 14044
 FLEOSTIGMA (Fungi) (p.1861), 15453
 Pleura. (See also *Thorax*.)
 absorption of fluid from, pneumothorax and breathing rate as affecting, 12924
 dog, 12924
 Pleuritis, opium derivatives as affecting, 5750
 tuberculous infection and, 2386
Pleuronectes (p.1879), abundance in Baltic, factors affecting, 5405
 growth rate, 1859
fesus, seasonal variation in fat content, 12429
microcephalus, larval distribution in Scottish waters, 152
plattessa. (See also *Plaice*.)
 food habits, 155
 Pleuronectidae (Pisces), p.18794
 Pleurophoridae (Mollusca), p.18724
Pleurophorus (Pal), transposed hinge, 10564
 Pleuropneumonia. (See also *Pneumonia*.)
 bile-salt effect on organism, 9954

bovine contagious, absence from India, 17394
 immunization to, by lanolin-pleural serum vaccine, 13529
 preventive inoculations for, statistics, 8166
 transmission and immunity relations, 11747
 in Uganda, 2718
 differentiation of organisms of type, 1056
 -like organisms, nature, 15412
 polyarthritides in rats due to, 15360
Streptobacillus moniliformis associated, 13693
 relationships, 1185
 PLEUROSPERMOPSIS (Dicot.) (p.1866), 1185
 sikkimensis, new comb., 1185
 Pleurotomariidae (Mollusca), p.18721
 Pleurotrichidae (Protozoa), p.18683
Pleurotropis (p.1878), hyperparasite of *Apanteles*, 5067
sedentatus, parasite of *Ancylistis complana*, 1523
tarsalis, hyperparasite of *Schizocotus*, 10447
 Plexus, nerve. (See under *Nerve*.)
Planckenia (p.1883) † *magnifontis* (N), 18097
Plioceros (p.1883), synonymy, 8867
Pliochippus (p.1883) *fossulatus*, cranium of (N), 10669
 Ploceidae (Aves), p.18823
Plodia (p.1877) *interpunctella*, in warehouses, control, 3192
 Ploima (Rotatoria), p.18712
 Plot(s). (See *experimentation* under *Agriculture*; *Horticulture*.)
 Plover, upland, increase in Pennsylvania, 5415
 Plowing. (See *Tillage*.)
 Plum(s). (See also *Prune*; *Prunus*.)
 cultivated, history and origin, 17632
 hardy stocks for, Poland, 3014
 pocket disease, effect on pericarp development, 10367
 variety tests, Washington, 13872
 xylan formation in stone, 13789
 Plum curculio. (See *Conotrachelus nenuphar*.)
 Plum leafhopper. (See *Macropsis trimaculata*.)
 Plumage. (See also *Feathers*.)
 henny feathering, factors in, 2167
 sex dimorphism, of down and adult, 7153
 Pilgrim goose, 5341
 review, domestic fowl, 2160
 testes as affecting, 12545
 silky, inheritance, pigeon, 12545
Plumaria (p.1860) *elegans*, life history, 18722
Plumatella fungosa, food habits and digestion, 9046
Plumbagella (p.1866) *micrantha*, embryo, 17553
 sac development, 17553
 Plumbagaceae (Dicotyledones), p.18664
Plusioporos (p.1878), n. sp., 8749
Plutella maculipennis, on crucifers, 5045
Pluteus (p.1862), n. sp., 4737
 Pneumatocysts, in *Monograpus*, 3272
 Pneumococcus(i). (See *Diplococcus pneumoniae*.)
 Pneumococcosis. (See *Pneumococcosis*.)
 Pneumogastric nerve. (See *Nerve, vagus*.)
 Pneumonia. (See also *Diplococcus pneumoniae*; *Klebsiella pneumoniae*; *Bronchopneumonia*; *Pleuropneumonia*.)
 antiserum-sulfanilamide therapy, 4573
 blood euglobulin and pseudoglobulin in, 8637
 book, 13604A
 chemotherapy, 8174
 13551, 15194, 15203, 15215
 17243, 17249, 17254, 17255
 plus serotherapy, 17270
 statistics, 17213
 in childhood, 15345
 diagnosis and therapy, costs, 8296
 diet relations in laboratory animals, 2521
 in diphtheria cases, influenza and diphtheria bacilli associated in, 4617
 epidemiology and control program, Illinois, 15316, 15317
 etiology and epidemiology, 11694
 of foals, *Corynebacterium equi* from, 18662
 serological typing, 17366
 forms, review, 15369
 in goats, 8174
 immunization to, 11706
 incidence and mortality statistics, 15318
 in infants, etiology, 7921
 lobar, in anthracite miners, mortality, 15216
 chemotherapy, 13629
 diagnosis and therapy, 13629

Pneumonia (continued)
 lobar (continued)
 encapsulated pneumococci in sputa in, 4612
 epidemiology, in army vs. populations of Dutch E. Indies, 13644
 expt'l. dog, 5321
 immunity to, mechanism, 2537
 phagocytosis and effect of serotherapy, 2537
 pneumococcus rabbit antiserum therapy, 13402
 pneumococcus type incidence in, 13629
 serum therapy, 4235, 5520
 sputum studies in, 15214
 vit.-C therapy, 15214
 mortality in relation to climatic and socio-economic factors, 6209
 ovine verminous, relation to epizootic pulmonary adenomatosis, 17386
 in Rocky Mountain big horn, 4678
 pleuro-pneumonia-like micro-organism causing, white mice, 14921
 pneumococci, antibodies in, detection, 13403
 antiserum therapy of types, 4477
 autogenous vaccine prep. for, 8107
 chemotherapy, 15182, 13537
 plus serotherapy, 15201, 17275
 of type-III, 15191
 immunization, by stock vaccine, 13401
 by type-III antisera, 13537
 intramuscular serum therapy in children, value, 4176
 normal hog serum as affecting, 8150
 pathogenesis, guinea pig, 7861
 polysaccharide in blood in, detection, 13403
 prognosis and therapy, 13403
 rabbit vs. horse antiserum therapy, 13510
 serodiagnosis, prep. and analysis of sera for, 4528
 production and standardization of antisera for, 6077
 serotherapy, 4436, 17132
 clinical experiences, 13444
 control by clumping of encapsulated cocci in sputum, 9844
 sulfanilamide-serum therapy of type-III, 17133
 sulfapyridine therapy, 8176, 8180
 12643, 13403
 plus serum therapy, 13403
 therapeutic evaluation by, 13462
 therapy with hydroxyethylapocpreine, 4233
 type analysis statistics, 11637
 pneumococci lobar, book, 13604A
 chemotherapy, 15192
 of type III, 15197
 statistics, specific serotherapy and, 9856
 pneumococci type-I, 983
 sulfapyridine with and without serotherapy, 9926
 pneumococci type-III, mechanism of development, 17308
 sero- and chemotherapy, 9918
 pneumococci type XIV, rare sequelae, 4620
 during pregnancy, man, 13040
 in rats, 8242
 serotherapy, statistics, 17213
 sulfapyridine therapy, sulfanilamide compared, 8177
 terminal, origin and path., 2557
 virus, in infants after secondary infections, 11614
 in stock mice, 2616
 in Swiss mice, 9948
 Pneumonic plague. (See *Pasteurella pestis*.)
 Pneumococcosis. (See also *Silicosis*; etc.)
 etiology, review, 2352
 Pneumoperitoneum, artificial, mediastinal emphysema as complication, 12918
 surgical, x-ray study, 3776
 Pneumothorax, air emboli as complication, 16584
 artificial, in therapy of tuberculosis, 16903
 from bronchial compression, epituberculosis and, 619
 and cavitation in Hodgkin's disease, 622
 effect on pleural fluid absorption, dog, 12924
 hemo-, tuberculosis and, 16890
 in production of precordial friction rub, 11187
 spontaneous, massive atelectasis and, 3777

- Pneumothorax (continued)
 surgical, x-ray study, 3776
 in tuberculosis therapy, 7533
Poa (p.1864³). (See also *Grass*.)
 n. spp., 1158, 8426
pratensis. (See also *Bluegrass*.)
 forage production, clipping as af-
 fecting, 12601
 pollen, antigenic relationships, by
 Dale test, 15142
 water utilization, factors influencing,
 1203
stiriaca, in S. E. Europe, 13747
Poaceae (Monocotyledones), p.1864²
Podagrion (p.1878³), morph., phyl., 1632
Podandrogynae (p.1865³), n. sp., 2865
Podiceps (p.1881¹) *poliocephalus*, life hist.,
 5171
Podicipedidae (Aves), p.1881¹
Podicipediformes (Aves), p.1881¹
Podocarpus (p.1864¹), spp. in Argentina,
 15484
Podocopa (Crustacea), p.1873¹
Podocotyle (p.1869³) *shawii*, in *Oncorhynchus*,
 17938
Podophacidium (p.1862¹) *xanthomelum*,
 descr., 15460
Podophyllum (p.1865³), n. sp., 2861
 resin of, preparation, 1345
Podostemonaceae (Dicotyledones), p.1865⁴
Podostroma (p.1861¹) *africanum*, 8387
Poduridae (Collembola), p.1874²
Poecilichthys (p.1880¹) *exilis*, squamation,
 8817
Poeciliidae (Pisces), p.1879²
Poecilocampa (p.1876⁴) *populi*, morph. of
 abdominal somites, 3358
Poëphagus (p.1883⁴) *grunniens*, chromosome
 number, 8920, 16165
Pogonomyrma (p.1878³), n. sp., 6922
Pogonothermes, sloths as, 5214
 urea formation in, 12805
Poinsettia, root aphid, control, 5042
Poisson(s). (See also *Toxicity*; *Venoms*.)
 action, quantum relations, 8868
 animal, review, 14440
 for arrows, in latex of *Calotropis*, 15687
 derrick, for fish, 17390
 gases. (See under *Gases*.)
 nitrogen-free, 14441
 resistance to, sexual intercourse as af-
 fecting, 12929
 vegetative, effect on bactericidal power
 of blood serum, 4561
Poison ivy, cutaneous sensitization to,
 gross and microscopic changes in,
 17141
 mechanism, 11544
 dermatitis, serodiagnosis and sero-
 therapy, 6081
 sensitivity, allergic nature, 13483
Poisoning. (See also under specific chemi-
 cals, e.g., *Arsenic*, *Mercury*, and un-
 der gases, e.g., *Carbon monoxide*;
Toxicity.)
 arsenical-wallpaper, aspergillosis and
 penicilliosis vs., 13622
 of foods. (See under *Foods*.)
 by lupin, in Morocco, 11748
Poisonous plants. (See also genera, e.g.,
Aconitum; and groups, e.g., *Mush-
 rooms*.)
 of East Africa, 10288
 of England, 10683
 of P. I., used for poisoning arrows and
 dogs, 1348
 in Morocco, 11748
 for preparing poison arrows, Ecuador,
 10298
 to sheep, 2697
 of U. S. A., book, 12042
 of Wyoming ranges, 15092
Polanista trachysperma, prochromosomes,
 3449
Polarity. (See also *Gradients*; *Electric po-
 tential*; *Growth*.)
 in apples, factors affecting, 15783
 in *Coleus* cuttings, effect on transloca-
 tion of heteroauxin, 13985
 electric, light and O₂ as affecting,
 4952
 in fern prothallia, factors causing,
 17699
 of fruit body of *Polyporaceae*, 17493
 of *Fucus* eggs, pH as affecting, 3078
 of horseradish root, plant hormones as
 affecting, 10303
 light as affecting, *Cystoseira* eggs, 1386
 tomato, 17682
 in plant cells, relation to centrifugation,
 8907
 in *Populus* shoots, heteroauxin as af-
 fecting, 3060
Polarized light. (See *Light*, polarized.)
 Polarograph, in study of cancer serum,
 13234
 of extracts from post. pituitary, 12994
 of hydrocarbons, carcinogenesis and,
 13233
 of insulin, pregnyl, and pituitary ex-
 tract, 9378
Polemoniaceae (Dicotyledones), p.1867¹
Polemoniales (Dicotyledones), p.1867¹
Polioencephalitis, hemorrhagica superior,
 etiology, 7904
Poliomyelitis. (See also *Encephalomyelitis*.)
 acute anterior, 8154
 antiserum penetration of CNS in exp.,
 9360
 in Brazil, 17238
 chemotherapy, 920, 15207
 by merphenyl borate and sulfa-
 nilamide, 920
 complement fixation tests, 17147
 early diagnosis and therapy, by polio-
 myelitis antistreptococcal se-
 rum, 17195
 epidemiological study, 8286
 case study and, 949
 recent advances, 6211, 17377
 exptl., permeability of hematoen-
 cephalic barrier, to horse-
 serum, monkeys, 12649
 NO₃ and Br tests for, monkey,
 9081
 relapse in, 4591
 vit. C as affecting, monkey, 7490
 humoral vs. tissue immunity to, 13449
 immunity or lack to Philadelphia
 1932 strain in exp., 15163
 immunization to, exp. active vs. pas-
 sive, 11531
 route as affecting, 13449
 incidence in China, 2684
 lymphocytic choriomeningitis as af-
 fecting, 2612, 17254
 mastix reaction curve, 7913
 neutralization tests with sera of
 virus strains, 9060
 pathogenesis vs. virus con., 9853
 pathology, 13246, 15217
 precipitation tests in, 17147
 production by nasal instillation of
 stools, 15229
 prophylactic immunization not recom-
 mended, 11560
 prophylaxis, by local protection, 9850
 second attacks in man vs. monkey,
 15163
 susceptibility to diphtheria and, 4658
 virus, absence in blood of exptl.,
 11515
 in lymphatic apparatus, 13589
 detection in man and monkey, 2618
 immunologic comparisons, 13582
 isolation and preservation, 17377
 neuronal dissemination, 15217
 neurotropic nature, 11615
 passage between intestines and
 nervous system negative,
 15229
 pia-arachnoid as barrier to
 "sparing effect" of virus of
 lymphocytic choriomeningi-
 titis on, 2612
 strains, compared, 946, 6165
 from feces of non-paralytic cases,
 13582, 13584
 vit. C nutrition as affecting, 4658
 anterior, relation to Landry's ascending
 paralysis, 2410
Pollitellum (p.1862³), species transferred
 from, 6348
Polistes, homing sense, habits, 18027
fuscatus v. *metricus*, predator of
Protaporce, 5085
rubiginosus, nesting, 10613
Pollen. (See also *Gametophyte*, male; *Hay
 fever*; *Meiosis*; *Microsporogenesis*;
Pollination; *Stamen*; *Sterility*.)
 abortion in apples, cytol. and morph.,
 2997
 as aid to phylogeny of Abietineae, 4761
 in air, quantitative detn., 6038
 allergic shock induced by, effects, 13509
 analysis, in tracing vegetation and suc-
 cession, 123, 1839
 1843, 1844, 8516, 7188
 7193, 7196, 7205, 9016
 9018, 9026, 12589, 12605
 16254, 16255, 16257, 16258
 technic, 8410
 use in anthropological research, 17028
 antigen-antibody complex, Schwartzman
 phenomenon by, 796
 antigenic relationships, by Dale test,
 15142
 blocking substance formation by treat-
 ment with, 6068
 coincident positive skin reactions in hay-
 fever cases to various, statistics
 and significance, 15145
 cross-seroreactions with, 11525
 development, *Artemisia*, 4308
Carex, 6448
Juncaceae and *Cyperaceae*, 17568
Typha, 4766
Urtica, 11912
Utricularia, 2907
 dissemination, relation to anthesis,
 Beta, 6459
 dispersal, mechanism in *Corydalis*,
 10170
 dried, acetocarmine stain for, 16157
 effect on fruit, *Castanea*, 12584
 on fruit development, apples and
 pears, 6526
 extracts, preservation, 15131
 preparation, 17140
 of ragweed, activation of ultrafil-
 trates by colloids, 6074
 allergenic activity of protein vs.
 nonprotein fractions, 18493
 inactivation by adsorption, electric
 charge and, 15128
 germination, forest trees, 15773
 vitamins as affecting, 8578
 in honey, 8670
 grass, serological specificity, 11557
 intranasal instillation, facial acne
 caused by, 13439
 longevity, in *Ginkgo*, 6380
 temp. and humidity as affecting,
 13890
 pine, allergy to, 15160
 ragweed, antibody production in
 animals, 11525
 chemistry and immunology of pro-
 teins, 2542
 oral adm., 17121
 skin-sensitizing antibodies passively
 transferable to man, 11566
 size, relation to polyploidy, 1742, 8926
 sterile, of *Digitalis* hybrid, 10731
 incidence and inheritance, potato,
 8936
 sugar-beet, airplane collections, 9024
 survey, in California, 9539
 tube, growth in *Prunus*, relation to cross
 fertilization, 8507
 viability, 8573, 17695
 temp. and humidity as affecting,
 13890
Pollenia rudis. (See also *Fly*, cluster.)
Pollination. (See also *Fertilization*; *Hy-
 bridization*; *Pollen*.)
 of avocado, by insects, 1249
 by bumblebees, rôle of floral shape and
 color in, 12574
 of coconuts, insects and birds respon-
 sible for, 8494
 effect on pistillate flower of *Vallneria*,
 10168
 expts. with *Silene* crosses, 10139
 10140, 10141, 10142, 10143
 mechanics in *Caluna*, 2909
 modes in *Wolffia*, 2836
 of red clover, by bumble bees, 15562
 self vs. cross, in legumes, nodulation
 and, 8352
 symbiotic promiscuity correlations,
 17441
 of tomatoes, in greenhouse culture,
 1245
 of vanilla, Puerto Rico, 8511
Pollution. (See *Air*; *Dusts*; *Fumes*; *Gases*;
Smokes; *Soot*; *Water*, pollution; etc.)
Poleocyte. (See *Oogenesis*.)
Polygonum, permeability of organs to, 5427
Poliphila spp., psittacosis in, 954
Polyarteritis nodosa, case, 7734
Polyarthritides. (See under *Arthritides*.)
Polypbia (p.1879³), spp. predators of pink
 bollworm, Brazil, 12281
Polyborus † *pralatus*, 8836
Polybothrus (p.1873⁴) *leptopus*, morph.,
 16012
Polycaulon (p.1862¹), tax., 6364, 8412
Polycelis (p.1869²) *nigra*, validity, 12302
Polycera (p.1872¹) *quadrilineata*, larvae,
 8746
Polyceridae (Mollusca), p.1872¹
Polychaeta (Annelida), p.1871¹
Polychloropentane, as soil poison, for
 termites, 10463
Polychorus carmelensis, egg laying, 6791
Polychroa (p.1877²) *botrana*, L.H. distrib.,
 food plants, parasites and control,
 12174
Polycladida (Platyhelminthes), p.1869²
Polycystididae (Platyhelminthes), p.1869¹

SUBJECT INDEX

Polycythemia—Population

- Polycythemia, blood cholesterol and splenic hormone in, 4254
 cardiodynamic studies, 4067
 choline as affecting, 9542, 12648
 liver feeding and, dog, 14802
 in exptl. fever, dog, 7370
 familial, circulating, cell mass, 13262
 immature cells and, 7880
 observations, 2389
 sternal, spleen, and liver puncture, cell study, 5380
 vera, coronary thrombosis, 14769
 phenylhydrazine in, 2297
 Polydactyly. (See *Digits*.)
 Polydesmidae (Myriopoda), p.1873¹
 Polydesmus (p.1873¹), tax., 16014
 Polydipsia. (See *Thirst*.)
 Polyembryony (plant). (See also *Embryo (plant)*; *Embryogeny*.)
 in *Boerhaavia*, 1171
 in *Lobelia*, 11914
 in *Saxegothaea*, 11915
 in *Sequoia*, 6440
Polygala senega, polygalitol from, isolation and properties, 1818
 Polygalitol, from *Polygala senega*, isolation and properties, 1818
 Polygonaceae (p.1865²), ovular stalk in, 8450
 Polygonales (Dicotyledones), p.1865²
 Polygonum (p.1865²), tax., 1153, 8426
 flaccidum, as source of mosquito larvae, Assam, 12223
 rumicifolium, *Ustilago* on, 8409
 Polygyra thyroideus, as mycophagist, 4742
 Polygynus (p.1879²), tax., 3389
 Polylactans, actinomycetes of milk and soil forming, 8365
 Polymastigida (Protozoa), p.1868⁴
 Polymastix (p.1868⁴) melonothae, in Japanese beetle, 1580
 Polymery. (See *Gene*.)
 Polymorphonuclears. (See under *Leucocytes*.)
 Polymorphus (p.1870⁴) marilis, from Nyroca, 10550
 POLYMYXA (Fungi) (p.1861²) graminis, on wheat, 15454
 POLYNEUROSIS (Col.) (p.1876²) hirsutus, 8780
 Polyneuritis. (See also *Eriberi*; *Vitamin B*.)
 alcoholic, vit. B₁ therapy, 14944
 gonorrheal, case, 6197
 serum-induced, incidence and therapy, 17126
 vit. B₁ deficiency and, 4258
 Polynoidae (Annelida), p.1871¹
 Polypedatidae (Amphibia), p.1880²
 Polyphaga (Coleoptera), p.1876¹
 Polyphaga (p.1861²) parasiticus, from N. America, 13737
 Polyphemidae (Crustacea), p.1873¹
 Polyphenol, color reactions, 12058
 Polyphylla (p.1876²) barbata, 6870
 Polyploidy. (See also *Chromosomes*; *Cytotaxonomy*; *Diploidy*.)
 aneuploidy, in *Aquilegia*, cytogenetics, 5293
 in Cyperaceae, 7106
 in *Avena* hybrids, 5292
 in *Bombyx*, 1728
 chromosome form and behavior in tetraploid *Aconitum*, 5285
 in *Tulipa* spp., 16190
 in Duke cherries and their derivatives, 16153
 euploid chromosome alterations and heritable variations, 16174
 haploid rye, induced by heat, 14348
 haploid wheat, chromosomes of progeny, 12509
 in *Hypericum* hybrids, 16183
 induced by acenaphthene, in plants, 16154, 16160
 by colchicine, *Fagopyron tataricum*, 16186
 lettuce, 12538
Nicotiana hybrids, 16188
Petunia, 14347
 plants, 71, 1698, 8941
 review, 16193
 sugar beet, 14363
 Triticinae, 7134
Triticum, *Secale*, 16154
 by dehydration, in microspores and pollen grains, *Tradescantia*, 10715
 by heat, alfalfa, 5312
Linum usitatissimum, 16178
 by hetero-auxin, *Nicotiana*, 3458
 by x-ray, *Oenanthus*, 51
 in *Malus* and *Pyrus*, 8910
 in Malvaceae, 1700
 meiosis, in *Impatiens*, 45
 microsporogenesis in diploids and triploids, *Lilium*, 7093
 in *Petunia*, 72
 and plant form, *Salicornia*, 12506
 in *Populus*, 5291
 relation to chemistry, 8925
 to distr. of *Crepis* (Dicot), 4777
 and growth habits, *Deschampsia*, 14545
 to geographical distr., *Dumortiera hirsuta*, 48
 Leguminosae, 3450
 to pollen grain size, peach, apricot, 1742
 to stomata, *Coffea*, 12502
 in *Salvia* spp., 1697
 in *Salvinia*, 17510
 segregation from aneuploid sporophyte of *Scolopendrium*, 5306
 sex mechanism and, *Melandrium*, 16191
 significance, in *Orchis*, 12526
 size, of plant parts, relation to euploidy, 5320
 of seed and other criteria, 8926
 in *Solanum gracile*, 7097
 in *Solanum* hybrids, 80
 somatic, in Odonata, summary, 14352
 and taxonomy, in Diapensiaceae, 8905
 tetraploid seedlings from triploids, apple, 12518
 in triploid hybrid of *Larix*, economic value, 5321
 Polypodiaceae (Pteridophyta), p.1863¹
 Polypodium (p.1863¹), n. spp., 1097
 2828A, 4757
 Polyporaceae (Fungi), p.1862⁵
 monograph, 11823
 morphogenesis and regeneration of fruit body, *Pomes*, 17493
 spore ejection in, 13728
 Polyporus (p.1862⁵), new species, 6353
 spore ejection, season of, 13728
 abietinus, cellulose and lignin utilization by, 3139
 anceps, longevity in wood, immersion as affecting, 5003
 annosus, growth on artificial media, pH as affecting, 6686
 betulinus, ungulinic acid from, 18734
 elstianus and anceps, variability of cultures, 10108
 fomentarius, color as affected by activity of fruit-body, 13728
 tube-layers, formation as affecting age in, 18728
 glomeratus, identification and rôle in canker and wood rot, 3169
 montanus, spore characters, 11825
 picipes, as food of snail, 4742
 Polypus (p.1872²) bimaculatus, mating and egg-brooding, 1610
 Polysaccharides. (See also specific polysaccharides, e.g., *Glycogen*, *Starch*, *Sucrose*.)
 actinomycetes of milk and soil forming, 8365
 adsorbability of antibodies to lipids vs., 13457
 of anthrax-bacillus capsule, antigenicity, 919
 bacterial, antigenicity factors, 9898
 effect on phagocytosis, 9873
 of *Corynebacterium* spp. and strains, serol. comparisons, 9898
 of *Cysticercus crassicolis*, immunity rôle, 13531
 of diphtheria bacillus, 2591
 dissociated antibody reactions with specific, 848
 of hemolytic streptococci, extraction by formamide, 9988
 of hemolytic streptococcus mucoid substance, serol. properties, 4475
 luteose, composition, 3594
 of *Monilia tropicalis*, sensitizing and antigenic capacities, 13505
 mucoid, in synovial fluid, 7366
 of mucoid typhoid-paratyphoid bacteria, immunological relations, 9874
 nitrogen-fixing bacteria producing, 1053
 pneumococci, capsular, sulfonamides as affecting, 17276
 cellular reactions to, 2569
 comparisons, 1053
 immunological properties of fractions of precipitin vs., 2523
 from pneumococcus mucoid substance, serological properties, 4475
 review, 14440
 specific, of *Hemophilus influenzae* type-B, 17129
 specific and non-specific, of bovine and human tubercle bacillus, 8136
 specific precipitation of sera with, formaldehyde and pH as affecting, 348
 specific somatic, as immunizing antigen of typhoid bacillus, 17215
 sugar in, detn., 17744
 of tubercle bacilli, 902
 cellular reactions to, 2569
 in urine, 18018
 Polystichum (p.1863²), n. sp., 8421
 Polystichus (p.1863²), syn., 6358
 Polystoma (p.1870³), characters, life hist., 1596
 hassalli, in *Sternotherus*, 6788
 Polystomidae (Platyhelminthes), p.1870³
 Polystomoides (p.1870³) oris, from turtle, 1596
 Polytelis anthopeplus, psittacosis in, 954
 Polythrincum (p.1863²), n. combs., 17487
 Polytoxa (p.1860³), copulation, 10107
 caeca, growth, pyrimidines as affecting, 1582
 Polytrichaceae (Bryophyta), p.1863²
 Polytrichum (p.1863²) commune, vital staining of vacuoles by neutral red, 7094
 Pomacentridae (Pisces), p.1880²
 Pomatiopsis lapidaria, cercariae infecting, 14205
 Pomegranate, fruit-cracking, 17847
 Pomelo. (See *Grapefruit*; *Citrus*.)
 Pomolobus pseudoharengus, trimethylamine oxide in muscles, 11758
 Pomology. (See also *Fruit*; *Horticulture*.)
 textbook, 10220
 Pomoxis sparoides, parasites, Florida, 15948
 Poupili. (See *Wheels*.)
 Pond(s). (See also *Lake*; *Pools*; *Wells*.)
 in abandoned quarries, biota, 14401
 effect on *Leucocytozoon* infection in turkeys, 12273
 fish-disease treatment in, 15861
 food for fish in, fertilizers as affecting, 16284
 of Jugoslavia, hydrobiology, 9045
 of lower Rheinland, hydrobiology, 9049
 relation between fish and plankton production in, 16283
 thermal stratification, 12618
 vegetation, Sweden, 10790
 Pongidae (Mammalia), p.1882²
 Pongo (p.1882²). (See also *Orang-utan*.)
 material in American collections, catalogue, 2459
 taurodontism in, 11439
 Pons. (See under *Brain*.)
 Pontarachna (p.1874²) halei, 3315
 Pontaripina (p.1874²), n. spp., 3308
 Pontomyia (p.1877²) cottoni, 3340
 Pontoporeia femorata, mating and range, 10573
 Pool(s), of Lapland, biota, temp., water composition and pH, 3202
 mossy, testaceous rhizopods in, 10526
 thermal stratification, 12613
 vernal, ecology, 7211
 Popillia (p.1876²) japonica, control, 1526
 distr. in U. S., 8641, 12208, 12236
 future dist. in N. America, 15901
 intestine, columnar cells, temp. as affecting, 8057
 larvae, starved, effect of humidity on respiration, 9179
 larval control by soil fumigation, 17887
 protozoan parasites, 1580
 repellent for, tetramethylthiuram disulfide, 12234
 status in St. Louis and control, 1485
 Poplar(s). (See also *Populus*.)
 black, spp. and hybrids in Great Britain, 3017
 cultivation in France, 15681
 in Italy, 8545, 13942
 felled, *Xyleborus* as affecting, France, 8653
 Popowia (p.1865³), n. spp., 15183
 Poppy(ies). (See also genera, e.g., *Papaver*.)
 from Manchoukou, seed and oil characters, 6535
 Population(s). (See also *Ecological equilibration*; *Eugenics*; *Statistics*, *vital*.)
 animal, organization and evolution, book, 8976
 of beavers, census methods, 5418
 methods of study, 3534
 in Minnesota, survey, 10819
 in Sweden, 162
 of birds, census in Rhodesia, 171
 drought as affecting, 167
 in relation to land use, Connecticut, 14436
 survey of pheasants, Michigan, 5417

- Population (continued)
 of birds (continued)
 of valley quail, seasonal changes in, 10818
 bird and mammal, change after afforestation, 161
 census of red foxes and striped skunks in Iowa, 10824
 density, biological effects of crowding, 9000
 cannibalism as response to crowding, lepidopteran larvae, 10766
 effect on:
Anopheles and malaria, Italy, 8655
 duration of larval and pupal stages, *Tribolium*, 16249
O₂ consumption and activity, goldfish, 434
 reproductive cycle, toad, 8954
 tuberculosis mortality rates, 10756
 growth and mice, 14556
 growth rate of *Euglena* and, 7184
 method of detn., *Microtus*, 14482
 of pocket gophers, Texas, 3492
 relation to growth and survival in *Euglena*-bacteria community, 7187
 to size of territory, *Euplectes*, 165
 distr. of self-sterility alleles in, 12516
 dynamics, in clover midge (*Contarinia*), weather factors as affecting, 15903
 of fleas on rodent, control and relation to climatic factors, 1514
 in forest insects, 15911
 in grasshopper outbreaks, factors controlling, 1498
 of meadow and pasture insects, 15904
 of pink bollworm of cotton, climatic factors affecting, 3184
 of reptorial birds and their prey, California, 6990
 fish, analysis, Michigan, 5401
 creel census, 14408, 14409
 in Lake Jesse, Nova Scotia, 10814
 in Michigan lake, 9051
 fluctuations of hares and grouse, factors in, 14435
 in mammalian, floods as affecting, 3495
 homozygosis, increase by selection and inbreeding, 7140
 human, age distr. in relation to death rates, 11695
 agricultural, of U. S., trends, 8978
 genetic surveys, in Germany since 1933, 1799
 growth, vital statistics and public health aspects, 8309
 hereditary structure, 5356
 industrial, tuberculosis mortality in, 11682
 intraracial distr. of metrical characters, 17026
 Japanese, racial analysis, 5928
 negro, struggle for survival in U. S. A., 6210
 plan for eugenic growth, Sweden, 8961
 present trends, book, 3486
 problems, in America, 3474
 rural vs. urban, intestinal parasites in, Cuba, 6748
 Silesian, analysis, 5940
 trends, birth control and, U. S., 8962
 insect, animal records, climatic factors affecting, Kansas, 1437
 dynamics, factors affecting, 8997
 economic importance of forest, 10768
 fluctuations in relation to insect outbreaks, 8995
 genetics, of *Drosophila pseudoobscura*, Central America, 8948
 of *Drosophila subobscura*, 16197
 larval anopheline, in rice field, 14167
 pests of potatoes, cyclic fluctuations, 6697
 sampling for soil, 9001
 seasonal changes in, 8998
 selective forces in, *Paratettix*, 16196
 static and dynamic aspects, 9004
 temp. as affecting, *Paratettix*, 8984
 of wireworms, potato injury and, 10410
 traps as affecting, 10406
 mite, in relation to vegetation, 1832
 of *Mus musculus*, in study of inheritance, 14369
 muskrat, drought as affecting, 5375
 in Wisconsin, survey, 12634
 natural, breeding systems in, *Dermestes*, *Mus*, 1779
 cytological studies, *Paris quadrifolia*, 5287
 gene arrangements, *Drosophila*, 1775
- Population (continued)
 natural (continued)
 heterostyly in, *Primula*, 1746
 randomness of mating in, 1735
 parasitic, numerical relations between red cells and *Plasmodium*, 6734
 rodent, in forested area in Minnesota, quadrat studies, 3496
 in given area, method of detn., 12575
 studies, book, 12473
 wheat, 15551
 tow net, of *Bathyporeia*, analysis, 10798
 Population(s) (statistical). (See also Distributions.)
 x-distribution, calculation of cumulants, 16219
 continuous, location of parameters, 8974
 discriminant functions, 16228
 distr. of estimates of 2 variances in sample, 1809
 homogeneity tests, 1818
 normal, distr. of range in samples from, 16221
 multivariate, tests of homogeneity of variances and covariances, 16213
 sampling distr. and selection in, 8971
 Poisson distr., applicability of Z test, 1808
 properties of normal univariate and bivariate distr., 3480
 Spearman's coeff. of rank correlation, 8969
 tests for equality of variances in sample, 16220
Populus (p.1865), n. sp. (N), 17475
 cytology of spp. and hybrids, 5291
 in dung of ground sloth, 7048
 nomenclature, 3017
 transgression and heterosis in crosses of, 1758
 wood properties, 1299
nigra, root formation, heteroauxin as affecting, 3060
sargentii, slime flux, new nema from, 17957
tremula, giant tree, 13945
tremuloides, atavistic leaf forms, 11853
trichocarpa, volatile oil in buds, composition, 3047
Poranopsis (p.1872) *japonica*, 10554
Porcellio (p.1873), n. spp., 8761
 color variations, 12328
 eye structure of blind spp., 5126
laevis, endoderm elements, origin and fate, 9783
 poultry cestode uninfected to, 10477
scaber, reproductive system, 52, 1613
Porcellionidae (Crustacea), p.1873
 Porcupine. (See also *Erethizon*; *Hystrix*.)
 attacked by fisher, New York, 5240
 by fox and wild cat, 18105
 new liver cestode, 10538
Poria (p.1862), n. spp., 4737, 6353, 17482
 causing sterile conks on birch, 15489
Porichthys (p.1880), revision, 12421
Porifera (p.1869), (See also *Sponges*.)
 Pork. (See *Meat*; *Pig*.)
Poronotus (p.1879) *tricanthus*, in Prince Edward I., 3884
 Porphyria, chronic congenital, coproporphyrin III in, 12758
 Porphyrias. (See under *Pigments*.)
Porphyrostiphon (p.1860), n. l., 1064
Porrocaecum (p.1870) *decipiens*, larvae, in marine fishes, 10496
Porthetria dispar. (See also *Lymantria dispar*.)
 control, 8654, 14134
 larvae of, weight as affected by sun vs. shade leaves as food, 5053
monacha, biol. control, 1504
 Portunidae (Crustacea), p.1874
 Post-glacial. (See also *Pleistocene*, and *Quaternary* in *Paleontological Index*.)
 history, data for study, 7188, 7196
 vegetation, of Europe, 9026, 16254
 of U.S.A., 7193, 7205, 9016, 12589
Postharmostomum (p.1869) *gallinum*, snail as interm. host, 14157
 Posture. (See also *Ear*, *labyrinth*; *Vestibular apparatus*.)
 analysis, man, 471
 changes in respiration, 12643
 conditioned reactions to position and angular acceleration, 4031
 defense. (See *Defense*.)
 effect on:
 blood pressure, 2276, 9510, 9511
 cardiac output, in failure, 7718
 circulation time, 7719
 distr. of blood in vessels, 16721
 metabolism, cardiac output and diuresis, 9511
 peripheral circulation, 16740
 pulse, 9509, 9512
 work and, 9512
 skin and subcut. temp., 7412
 erect, respiratory and circulatory disturbances, 12643
 muscle contractions, effect on intramuscular pressure, 11148
 muscular tension and fatigue as affecting, 7696
 reflexes in equilibrium, man, 4048
 rôle in childhood asthma, 18191
 of working man, anatomy and mechanics, 14991
Potamilla (p.1871), syn., 17962
Potamobates (p.1875) *variabilis*, 16036
Potamobius (p.1874) pleopods, regeneration, 9674
fluviatilis, *Cothurnia* in gills of, 8723
Potamogeton (p.1864), British records, 6432
rutilus, in Great Britain, 2833
Potamogetonaceae (Monocotyledones), p.1864
Potamogeton, host of *Coltoacaecum*, 17937
 Potash. (See *Fertilizers*; *Potassium*; *Soil*.)
 Potassium, absorption, by mangels and sugar beets, 17583
 action, epinephrine and, 13178
 amt. in mollusc, 6823, 6824
 in ash of *Cysticercus*, 17910
 balance, in adrenalectomized rat, 2036
 during growth, pregnancy and lactation, rat, 3967
 in blood. (See under *Blood*.)
 cardiac supernormality due to, 11177
 conc. in heart in heart failure, 13117
 in cotton nutrition, effect on *Fusarium wilt*, 1481
 deficiency, book, 15836
 effect on:
 fetal movements, 7603
 lettuce, 17642
 pea seedlings, 15697
 tomato hypocotyl, 6564
 in Scotch pine, 1447
 deposition in liver, 7508
 detn., 1932
 in biological materials, 5482
 in muscle, 14741
 in diet. (See under *Diet*.)
 distr. after inj., cat., 7258
 effect on:
 acetylcholine action, 13158
 acetylcholine liberation by brain tissue, 14060
 adrenalectomized rats, 5639
 blood K, adrenalectomized cat, 7389
 blood pressure and respiration, 9077
 carbohydrate metabolism, tobacco and pea leaves, 8535
 catalase, from apple seedlings, 14030
 circulation and respiration, 12643
 digitalis action, 5737
 edema of nephritis, 2134
 electrocardiogram, 506
 grain-straw ratio of wheat, 4818
 heart, frog, 7790
 rabbit, 14749
 ischemic pain, 12643, 14749
 isolated kidney, 7573
 leaf scorch, apples, 1237
 muscle, frog, 14799
 muscle excitability, *Mytilus*, 4053
 sensitivity to acetylcholine and, 2131
 muscle respiration, 16301
 myotonia, goat, 2312
 peach trees, southeast U.S.A., 15607
 photosynthesis, kinetics, 12058
 root growth, *Lemna*, 8575
 snap beans, S.C., 17584
 transpiration and photosynthesis, 15743
 fate after liberation during muscle activity, 14743
 as fertilizer. (See under *Fertilizers*.)
 fixation by soils, bases as affecting, 17614
 in heart, dioxan as affecting, 7810
 hereditary response to different levels, tomato, 12527
 in leaves, relation to Ca and Mg contents, 3058
 liver min.-vol. uptake and output, 3766
 metabolism, use of radioactive K in study, 12824
 movements, liver and, 12643
 in muscle. (See under *Muscle*.)
 muscle sensitization to by veratrin, 14739
 in nervous system, metrazol and camphor as affecting, 13157

in nervous tissue and muscle after adrenalectomy, 3821
output of liver, factors affecting, turtle, 361
physiological activity, radio-activity and, 3545
radioactive, absorption rate, 3546
conc. in tumor tissue, 16862
excretion in adrenalectomized rats, with and without salts, 7247
..... 12643
relation to electric potentials, *Nitella*, 1865
rôle in periodic family paralysis, 7451
in plant nutrition, 6561, 15702
tomatoes, 4915
soil fertility and, 1354
in saliva, 5602
salts, effect on refractory phase of heart, frog, 4126
in soil. (See under *Soil*.)
in tissue cells after injection, 9085
toxicity, factors affecting, 16307
in uterine secretion, fowl, 412
Potassium chloride, effect on:
 electrolyte changes of stimulated muscle, 473
 iris, frog, 11254
 nerve excitability, 14713
 expectorant action, 5758
 isotonic conc., detn., 5435
 radioactive isotope, effect on dog, 4116
cyanide. (See under *Cyanides*.)
iodide. (See *Iodides*.)
phosphate. (See *Phosphates*.)
sulphate, toxicity to *Tradescantia*, effect on protoplasm, 17733
Potato. (See also *Solanum tuberosum*.)
 bacterial ring rot, identification and control, 10355
 symptoms, 15890
 bacterial wilt, in Colorado, 3116
 blackleg (*Erwinia carotovora*), comparative etiology, 17763
 black scurf (*Rhizoctonia solani*), penetration of tuber as obstacle to seed disinfection, 15879
 racial differences in pathogenicity, 12149
 blue stem disease, environmental factors, 1448
 B deficiency, symptoms, 14076
 brown rot (*Bact. solanacearum*), control, soil pH and, 15888
 certification, in Scotland, 1477, 6691
 chocolate spot (undet.) in Tucuman, 17801
 comp. and cooking quality, mineral nutrients as affecting, 13910
 cooking quality, chemical test for, 8476
 Cu in, soil and fungicide content as affecting, 15405
 culture, Argentina, history descr., origin and names, 15556
 and fertilizers, Germany, 4832
 on muck soils, 1238
 diseases, in Oregon, 14095
 dry rot of tubers (*Fusarium*), control, 6691
 as feed for calves, 17078
 for poultry, 2512
 fertilizers for, Colorado, 4838
 Maine, 11939
 New England, 11936
 fertilizer placement tests, 10135
 field tests, correlation with greenhouse tests, 15554
 foliar diagnosis, action of fertilizers, soil as affecting, 13978
 relation to mineral absorption, 13977
 freezing of cells, relation between death and water-ice proportions, 1401
 green manures for, 4846, 11950
 growth and starch content, soil pH as affecting, 8473
 improvement and development in U.S.A., history, 11946
 injury, by bruising, var. differences and relation to type of market, 1190
 due to field slugs, Scotland, 12182
 in transit, 8477
 insect pests, European corn borer on, N.J., 17867
 insecticides, effect of Bordeaux, pyrethrum and S., 12197
 flea beetle on, control, 5032
 fumigants for, 8642
 peridicity of damage, and weather cycles, 6697
 psyllid, (*Paratrioxa cockerelli*) Texas, 14117
 scab-gnat on, outbreak, Ontario, 10419

Potato (continued)
 internal atmosphere, factors affecting, 10326
 internal brown spot, mineral nutrition affecting, 17797
 late blight. (See also *Phytophthora infestans*.)
 Sebago var. resistant to, 4848
 susceptibility, maturity as affecting, 12147
 Mg as affecting, 13803
 maturing period, racial and clonal differences, 6471
 mosaic (virus), latent, properties of protein from, 3126
 mild strain, 14065
 yellow types, 3169
 nematode disease. (See also *Heterodera schachtii*.)
 control by cyanamid, 1433
 by soil fungicides, 6684
 longevity of cysts in soil, 1431
 in roots, 6641
 var. resistance, 12148
 nematode parasites, 16000
 nomenclature of vars., 13834
 nutrition, relation to foliar diagnosis, 4914
 photoperiodism, 12081
 Peruvian vars., 6649
 Phytomonas sepedonica on, in U. S. A., 4968
 pink rot (*Phytophthora erythroseptica*) infection conditions, 4990
 pollen sterility, incidence and inheritance, 8936
 Pontiac var., 8471
 psyllid yellows, pathol. anatomy, 1482
 var. differences in tolerance, 4987
 purple-top wilt (virus?), transmission tests, 3169
 quality and yield, factors affecting, 1211
 Red Warba, history and nature, 17585
 respiration and C metabolism, ethylene as affecting, 17694
 rugose mosaic, a complex infection, 16905
 scab. (See also *Actinomyces scabies*.)
 acid-forming fertilizers as affecting, 15867
 control by calomel treatment of soil, 3169
 by Hg treatment of soils, 10372
 immunity, 14084
 resistance in, inheritance, 1739
 significance of pathogenic races in breeding for, 6670
 soil reaction as affecting, 12156
 var. resistance trials, 1452
 virulence, growth in culture and, 12152
 seed certification, Germany, 17600
 seed piece rot (*Erwinia carotovora*), comparative etiology, 17763
 silage, as pig feed, 11485
 slugs on, Scotland, 1609
 soft rot (*B. subtilis*), pigment formation in, 1430
 softening of tissues, pectins as affecting, 15793
 spindling sprout, non-transmissible type, 3169
 starch, digestibility, 3682, 5984
 var. differences, 11956
 storage and growth, waxing as affecting, 13813
 suberization in, microchemical study, 6669
 sugar content and respiration, storage temp. as affecting, 10322
 synthesis of glucoside by, ethylene chlorhydrin as affecting, 6585
 temp. of air and soil as affecting, 13817
 tuber, cell adhesion, temp. as affecting, 1026
 dormancy, breaking with chemicals, 14001
 with ethylene chlorhydrin, 1366
 O₂/CO₂ ratio as affecting, 6589
 formation, factors affecting, 14004
 growth inhibited by methyl ester of naphthaleneacetic acid, 12066
 sprouting, O₂ as affecting, 12075
 staining, with Bismarck brown, 16116
 tissue, permeability, heat as affecting, 1027
 variations, perpetuation, 1477
 yield, insect numbers as affecting, N. Y., 17873
 tyrosinase, activity, factors affecting, 14029, 17732
 tyrosine in, storage as affecting, 12115

Potato (continued)
 variety tests, Finland, 13821
 Great Britain, 2924, 6456
 13799, 13800
 on sandy vs. peat soils, Wisconsin, 10174
 Scotland, 13801
 vernalization, 15560
 virus diseases, altitude as affecting, 1436
 Peru, 6649
 rate of increase in seed stocks, 8609
 relationship of American and European, 3123
 separation of viruses 1 and 4, 6650
 spread at high vs. low altitudes, 15821
 types and effects, Scotland, 6647
 virus F, transmission by leaf contact, 8611
 virus mixtures, chemical separation, 3118
 virus X, goldsol reaction, 10361
 inheritance of immunity, 10362
 isolation and properties, 8613
 strains and properties, 3131
 transmission by leaf contact, 8611
 u-v. absorption spectrum, 17783
 vit. C in, cooking and handling as affecting, 11017
 distr., 4927
 in raw and cooked, 9235
 wart. (See also *Synchytrium endobioticum*.)
 genetics of resistance, 65
 longevity in soil, rotation and, 15876
 wireworm injury to, Wash., 10410
 withers broom (virus), in Scotland, 1477
 yellow dwarf (virus), inhibition of virus by insect juices, 10357
 properties and transmission, 3119
 symptoms, insect dissemination and var. resistance, 17794
 yields in Ohio, reasons for low, 11938
 yield and size, time of irrigation as affecting, 2933
 yield and storage, cold as affecting, 2949
Potato beetle, Colorado. (See *Leptinotarsa decemlineata*.)
Potato flea beetle. (See *Epitrix cucumeria*.)
Potato leafhopper. (See *Empoasca fabae*.)
Potato tuber worm. (See *Gnoristhesa operculella*.)
Potential, electric. (See *Electric potential*.)
Potentilla (p.1865⁴), tax., 2865, 4784
..... 8444, 15486
canadensis, *Tylocladia* on, 15897
Potentiometry, aerobacilli differentiated by, 2761
Poteriocrinidae (Echinodermata), p.1871¹
Potos (p.1883²), n. subsp., 7042
Pottia (p.1863²) *truncata*, annulus morph., 15481
Pottiaceae (Bryophyta), p.1863²
Poulton, Edward B., portrait, 7075
Poultry. (See also *Domestic fowl*; *Ducks*; *Eggs*; *Geese*; *Turkeys*; etc.)
 cestodes, brilliant green therapy, 17279
 Hawaii, 10477
 coccidiosis, bulletin, 6731
 diseases. (See under kinds of poultry, e.g., *Domestic fowl*, and under specific diseases, e.g., *Pullorum disease*.)
 dressed, avian tubercle bacilli in, 1012
 grading, 15098
 precooling, 13670
 surface drying when frozen, 17093
 dressing % of Los Banos Cantonese, 6018
 egg production and cost, form of ration as affecting, 17099
 electrical methods of killing, 17107
 exptl. trichinosis in, 8700
 feeds for, green feed in, 2505, 6023
 protein, relative value of combinations, 15125
 single-cereal ration, effect on fertility, 15112
 wheat bran, effect on growth and maturity, 15126
 feeding systems, for laying hens, 9825
 growth, postnatal, factors affecting, 17096
 helminths, Scotland, 6749
 hereditary chondrodystrophia, transplantation studies, 13832
 husbandry, economic aspects, Canada, 11507
 nematode in cecum, Hawaii, 10478
 nutrition, summary, 783
 prepn. for market, 17111

- Poultry (continued)
Salmonella infection in, 6255
 spirochaetosis, 2697
 Poverty, relation to cancer incidence,
 Argentina, 13222
 Pox. (See also *Variola*).
 in canaries, mercurochrome therapy,
 15374
 fowl. (See *Epithelioma contagiosum*).
 pigeon-, epidemic, 2633
 immunization by tissue-cultured vac-
 cine, 11570
 sheep. (See *Variola ovinia*).
 snake, 1010
 turkey-, epidemic, diagnosis and im-
 munization, 957
PRADOIA (*Brachyopoda*) (D), (p.1871³).
 16001
 Prain, David, portrait, 7075
 Prairie. (See *Grasslands*).
 Prairie dog. (See also *Cynomys*).
 burrows, ecology, 114
 Praon (p.1873²), spp., parasite of aphid,
 10451
 Praepsylla (p.1878⁴) ingrami, 14279
PRATILEPUS (1882³) kansansensis, (N),
 14311
 Pratylenchus (p.1870⁴) pratensis, biology of,
 15820
 Precipitation. (For meteorological precipi-
 tation see *Hail, Rainfall*).
 -flocculation reaction, Forssman antigen
 and antibody demonstrated by,
 809
 reactions, in postencephalitis, 2418
 quinoline, with phenols, 17370
 sera, purification by saturation, 8133
 8134, 8135
 Precipitin(s). (See also *Agglutinins; Anti-*
 bodies; and specific precipitins, e.
 g., *Typhoid agglutinins*).
 absorption with *Drosophila* antigens,
 taxonomic significance, 14367
 biologically produced, in vitro-produced
 agents reproducing action, 6073
 to egg-albumin, formation and trans-
 mission to offspring, 8155
 isolation of anti-crystalline, 8124
 formation in rabbits, hereditary rela-
 tions, 9863
 against pneumococcus polysaccharide,
 immunological properties of
 fractions, 2523
 production, as influenced by nicotinic
 acid salts, 2552
 by vit.-C, 2553
 reaction, in detn. of animal relation-
 ships, 6066, 6117
 in rheumatic fever before onset, 2377
 in sera, content vs. titre, 1978
 tests, standardization of technic, 6117
 in trichinosis diagnosis, 8699
 Pregnancy. (See also *Estrus; Menstrua-*
 tion; Ovulation; Puerperium; etc.)
 allergy prophylaxis in, 11541
 anemia, blood findings in, in Indian
 coolie women, therapy, 644
 erythrocyte fragility in, 632
 blood Ca, P and phosphatase activity
 during, man, 3959
 blood cholesterol during, 7582
 blood Cu during, 12825
 blood ketone bodies during, 9432
 diet and, sheep, 3698
 blood levulose during, 11110
 blood O₂-CO₂ content in normal and
 decebrate cats, 3651
 blood O₂ dissociation curve, cow, 7378
 man, 2156, 2159
 blood phosphatase changes during, man,
 14689
 blood proteins during toxemia and,
 2158
 blood studies during, sheep, 7575, 7576
 Ca balance during, mice, 2166
 circulatory disorders in, 2159
 diabetes mellitus and, 4282
 diet during, economic level and,
 England, 265
 duration, in deer, 424
 detn. by blood picture in fetus, 2161
 in *Macaca radiata*, 5232
 review, 5677
 thyroidectomy as affecting, rabbit,
 11107
 eclampsia. (See *Eclampsia*).
 effect on:
 blood coagulation, 14924
 blood comp., cow, 13036
 blood picture, man, 3968, 7532
 circulation, man, 3962
 electrocardiogram, 502
 growth of mammary carcinoma, mice,
 583
 Pregnancy (continued)
 effect on (continued)
 Hb value in man, 3974
 Fe as affecting, 16442
 immunity against encephalitis virus
 mouse, 7538
 mouse ovary, progesterone as affect-
 ing, 16665
 potassium balance, rat, 3967
 red cell fragility, in tropical anemia,
 7878
 sedimentation rate, guinea pig, 11824
 sex-skin, orang-utan, 3976
 susceptibility to anaphylaxis, rat,
 7601
 endometrial changes during, man, 7579
 erythroblastic splenomegaly during,
 16664
 estrogens in tissues during, 3879
 growth increase during, cause, 11103
 hormones in blood. (See under *Blood*,
 hormones).
 interrelations of Hb, basal metabolism,
 and creatine, creatinine and Mg
 during, man, 3975
 intra-uterine bleeding in rat, placental
 sign, 13050
 iron deficiency during, man, 14676
 lipids in mammary gland during, 14688
 liver fat, glycogen and protein content
 during, mice, 4349
 maintenance, in castrate does with
 pregneninolone, 12944
 in hypophysectomized rabbit by
 estrin, 7602
 meningococemia during, 17309
 mineral and protein metabolism during,
 9177
 muscle fibers in uterus during, rabbit,
 3969
 pneumonia as complication, man, 13040
 progesterone as affecting, in castrate
 rabbit, 3955
 protein anabolism during, rat, 7598
 pseudo-, due to electrical stim. of cervix
 in diestrum, 415
 effect on survival of adrenalectomized
 cats, 9288
 renal and hypertensive disease in,
 16646
 renal ischemia in, effects in animals,
 414
 sex hormones and, 11405
 structure of ovary in primates during,
 695
 test, Aberhalden's reaction. (See also
 Aberhalden's reaction).
 modified, 3978
 comparison, 11097
 Friedman, climate as affecting, 16659
 Patterson, investigation, 13038
 technic, 13039
 use of reducing factor in urine,
 14677
 using urine, toad, 3964
 Visscher-Bowman, investigation,
 13037
 xenopus, priority, 16662
 thyrotropic hormone in pituitary dur-
 ing, rat, 14648
 toxemia. (See under *Toxemia*).
 uterine control of ovary during,
 hamster, 11106
 vaginal bleeding and fetal resorption in,
 strain differences, rat, 16657
 varicose veins during, 11108
 vit. A and carotinoids in blood during,
 Batavia, 318
 vit. C effect on blood comp. in, 12859
 requirements during, man, 9431
 weight during, effect on size and num-
 ber of pigs, 5979
 Pregnandiol, in urine, 5655, 12936, 16609
 detn., 2151
 luteal activity and, 5648
 in menstrual disorders, 9645
 Pregneninonol. (See under *Androgens*).
 Preissia quadrata, air pore movements,
 11846
 Premunition, in animal diseases, statistics,
 8166
 in tapeworm infections, immunity vs.
 crowding, 10485
 Preputial gland, "acid" phosphatase,
 rat, 1892
 Presbyitis ciliellus, prostate and uterus
 masculinus, sex hormones as af-
 fecting, 16991
 Preservation of dust and pollen extracts,
 method, 15131
 of linseed oil by esters, 11769
 of plants containing HCN, 1816
 of vaccinia virus, 17219
 of viable trypanosomes, 12255
 Preservatives. (See *Food; Museum, tech-*
 nica; Wood; etc.; and under special
 preservatives.)
 Pressure, atmospheric. (See under
 Atmosphere).
 hydrostatic, effect on cleavage, *Arbacia*,
 on cyclosis, *Eliodea*, 4388
 6580
 Prestonia (p.1866²), n. sp., 2867
PRETORIANA (Dipt.) setosa, 6896
 Prianthidae (Pisces), p.1880⁴
 Prickly pear. (See *Opuntia*).
PRIDANIA (Dicot.) (p.1865²), 2861
 Primates (Mammalia), p.1882²
 blood serum, biochem. difference in
 spp., 8027
 coracoid process in, 17025
 occurrence of organ of Ackerknecht in,
 7929
 phylogenetic increase in body and skull
 size, 17016
 protein complex in different species,
 9746
 reproductive processes, phylogenetic
 seriation and, 11104
 substantia nigra, nerve cells, melanin
 pigment in, 15017
 teeth, pulp cavities in, 11439
 Primitive streak. (See *Embryo*).
 Primula, chemico-genetical relation of
 anthocyanins, 12519
 acaulis, heterostylism in natural popu-
 lations, 1746
 Primulaceae (Dicotyledones), p.1866⁴
 Primulales (Dicotyledones), p.1866⁴
 Primulin, *Leptospira* demonstrated by,
 11575
 Primulitol, bacterial utilization, 2757
 Principes (Monocotyledones), p.1864⁴
Prionocera (p.1876³) chiricahuae, 14245
 Prion, bill formation in, 5183
 Prionopidae (Aves), p.1882²
Priscacara (p.1880²), descriptions and
 key, 5161(E)
 Priscacaridae (Pisces), p.1880²
Prismatophyllum (p.1869⁴) (D), n. sp.,
 10535
Pristomerus (p.1873²) vulnerator, parasite
 of coding moth, 14104
Proactinomyces asteroides, from sinus pus,
 975
Proales (p.1871³), n. sp., 6807
 Notomata theodora, trans. to, 6806
Proantilocapra (p.1883⁴), review, 8867
 Probability, law, use in studying evolu-
 tion, 10671
 Probable error. (See *Error; Statistics*).
 Proboscidea (Mammalia), p.1883⁴
 Proboscis, in Dinosaurs, 14291
 Proboscine, action as influenced by evipal,
 by urea, 580
 14811
 -anesthetics, hypersensitivity to corre-
 lated with chem. structure, 18424
 corneal anesthesia by, factors affecting,
 7800
 effect on:
 blood gases, in spinal anesthesia, 254
 circulation and respiration, epineph-
 rine and, rabbit, 14845
 Gasterosteus, 14830
 skeletal muscle, 11230
 spinal cord, intraspinal inj., 14831
 sympathetic nervous system, 18507
 local anesthesia by, effect on opsonic
 index, 18507
 osseous intramedullary inj., effect on
 blood pressure, 13103
 plus MgCl, CaCl₂ and NaCl, for spinal
 anesthesia, 16768
 use in leprosy, 4166
Procamelus (p.1883⁴) grandis (N), 18097
 Proceaviidae (Mammalia), p.1883⁴
 Procellariidae (Aves), p.1881¹
 Procellariiformes (Aves), p.1881¹
Procerastia (p.1871³) halleizana, regenera-
 tion expts., 11466
Proceratium silaceum, biology, 12836
Prochilodus argenteus, spawning induced
 by pituitary extracts, 5895
 Prochordata, p.1878¹
 Prochromosomes. (See *Chromosomes*;
 Mitosis; Meiosis).
Prockia (p.1866²), n. sp., 2881
PROCTOTHEMATOIDES (Platyh.)
 (p.1869⁴) psidontophidis, 6803
Procyon (p.1883⁴) lotor. (See also *Raccoon*).
 light and diet as affecting breeding
 season, 3958
 lotor, food habits, Iowa, 5226
 Procyonidae (Mammalia), p.1883⁴
Prodenia (p.1877⁴) eridania, blood, physical
 properties, 244

- extrusion of nuclear material in blood cells,12518
pyrethrum inactive against, causes,6714
litura, on cocoa, New Guinea,14107
on cotton, relation to *Thrips tabaci* attack,3183
praefica, on tomato, control,3189
Productidae (Brachiopoda), p.1871²
† *Productus* (p.1871²), new subgenera of,3292
Profilicollis (p.1870⁴), status,10550
Progesterone. (See also *Ovary, extracts; Pregnandiol*.)
activity of derivatives,9365
androgenic action,9311
assay by local application to uterus, rabbit,14638
in blood, pregnant rabbit,3618
Clauberg test with synthetic estrogens,9802
as cortico-adrenal substitute, rat, 13049
cortin-like action,380, 9382
effect on:
androgen action on ♀ rat,11062
functional uterine bleeding,5855
genital tract,2118
growth and food consumption, rat,11103
joint diseases, man,3923
liver glycogen, ferret,12952
luteal function,11069
nasal mucosa, human,16637
ovary during pregnancy, mouse,16665
ovipositor, bitterling,9293, 13030
paradoxical action of estrone in ♂ mice,16616
pregnancy after castration,3955
pituitary gonadotrophic activity, rat,12930
pregnandiol excretion, man,12936
sex cycle, dog,7574
survival of adrenalectomized animals,5623, 7539, 7548, 12943
tubal contractions, rabbit,16638
uterus,13178
vagina, dog,14637
intrauterine inj.,930
-like action of desoxycorticosterone,12997
in maintenance of adrenalectomized rats,3827
in menstrual disorders,4273, 9645
metabolism and utilization, human,16009
in placenta,2165
in delayed pregnancy,9428
prep. from cholesterol,12993
production by adrenal gland, rat, 11061
synthetic compound with † the activity of, and effective orally,3844
Progne subis, *Plasmodium* from,3257
Prognichthys (p.1879³) *gibbifrons*, in Massachusetts,3388
Projector, film slide, electrically controlled,1944
micro, apparatus for detn. of particle-size distr., sulphur,12233
Prolactin. (See *Pituitary body, extracts, anterior*.)
Prolamines. (See specific prolamines, e.g., *Gliadin*.)
Prolan. (See under *Pituitary body extracts, anterior*.)
PROLEPIDODENDRON (p.1863⁴), n. spp.,13716
Promecothea, *Eurytoma* parasite of, 14061
Promunity, non-specificity and local character,13397
Promycetes (Fungi), p.1862²
Pronephric duct, development in amphibia,2444
Proneurotes (p.1870⁴) *baltica*,12303
Prontosil. (See also *Sulfanilamide; Sulfonamide*.)
album, agranulocytosis due to,11598
in canine spreading peritonitis,4572
derivatives, for measles complications,11538
effect on:
malarial infection of mosquitoes,15186
phagocytosis,6154
streptococcus dissociation,6154
in *Escherichia coli* infections,11587
leucoid reaction to,18254
progress in use,6187
in streptococci infections,4562
in therapy of diseases of small animals,11601
of malaria,8181
of tuberculosis,4557
of undulant fever,6136
of virus-disease,6146
in tropical diseases,17243
Prontylin. (See *Sulfanilamide*.)
Propadrine, effect on heart-lung prep.,2292
on smooth muscle,11216
Propagation. (See also *Reproduction, plant*.)
of *Achras zapota*, P. I.,4876
adventitious shoot production in *Lepidium*,4813
budding, of apples, abnormal behavior of Oldenburg on Malling, 13907
of rubber, effect on yield,13919
of *Citrus*, P. I.,17638
cutting sugar cane, germination and root emergence,1214
leaf-bud, use in plant propagation,1224
root formation as influenced by:
auxins, azaleas and rhododendrons,1361
grass and legume,10306
factors,11991
growth hormones, kudzu, 12071
growth substances, application methods compared, 15706
heteroauxin,15707, 15715
vit. B₁ and,15710
honey,15714
hormones, substances and methods compared,17683
plant hormones,13988
treating with hormones, new method for pecans,12073
transpiration, leaf-root ratio as affecting, apple, lemon,15744
grafts, apple, rootstock structure correlated with vigor,17623
intracellular gene effects, *Antirrhinum*, *Solanum*,8944
Nicotiana on *Hypocyanus*, effect on blooming time,1752
grafting, of annuals on biennials, effect on flowering,8571
in apples, coatings used in,1231
cold-injury lessened by,2987
effect of rootstock on composition of bark and wood,1267
of shoot,1275
effect on water conductivity, 8512
methods of top-working,8491
mortality, type of stock and part of scion as affecting,4880
rootstocks for, effect on seasonal chemical changes in shoots,8502
storage temp. for,10223
stock and scion relationships, 2979
interrelations of stock and scion, in apples and pears,2994
in *Citrus*, effect of rootstock on fruit,1244
compatibility of homo- and heteroplastic grafts, and effect on mineral metabolism, *Petunia*,10315
in grapes, fruit quality, rootstock as affecting,1250
rootstock effect,3006
in grapefruit, rootstocks for,8505
in lemons, rootstocks for, relation to decline and other diseases,8489
in mangoes, new device for,11990
in peas, factors affecting,15729
in pecans, rootstock and scion trials,15609
in Richmond cherries, rootstocks for,1272
transmission of flower-inducing hormones by,15713
in walnuts,8513
whip, value in avocado and other plants,11994
of *Helleborus*,11934
of *Remusatia* by bulbils,4768
root-shoot correlation in apple seedling,11928
vegetative, in *Chlorophytum*,1117
walnuts,8513
of woody ornamentals,1766
Propanolamines, effect on smooth muscle,11216
Propanorochis (p.1870⁴), syn.,6788
Prophanurus (p.1878³) *alecto*, from eggs of *Diatraea*,10459
Propionates, in flavor of swiss-type cheese,6273
Propionibacterium, glycerol dissimilation by spp., CO₂ utilization in,15398
growth factors for,4714, 17470
Tilsit cheese content and significance,6292
pentosacrum, adaptation to vit. B₁ synthesis,13712
co-carboxylase synthesis by,10057
growth factors for,17470
peptidase,2749
Propionic acid bacteria. (See *Propionibacterium*.)
Proplastids. (See *Plastid*.)
Proprioceptive reflexes. (See under *Reflexes*.)
Proprioceptive sensation. (See under *Sensation*.)
Propylaea, elytral spot morphology,3334
Propylamines, methoxyphenyliso, pharm.,11226
Propylbromide, anesthetic action, pH as affecting, fish,13183
Propylene glycol, toxicity and pharm.,554, 9552, 16758
n-Propyl-o-tolylurea, anesthesia, weather as affecting,11214
Prosaurolophus (p.1881¹), proboscis in discussion,14291
Prosencephalon. (See *Brain, fore; prosencephalon, rhinencephalon, telencephalon*, and *diencephalon*; and specific parts, e.g., *cerebrum* and *thalamus* under *Brain*.)
Proseptasine, in malaria prophylactic therapy,13549
for measles complications,11588
in tropical diseases,17243
Prosopis (p.1865⁴), n. sp. (N),17475
Prosopon (p.1874³) † *würgauensis*, (J),15943
Prosoponidae (Crustacea), p.1874³
Prosternychus (p.1869³) *magniovaratus*, 6803
Prostodum (p.1862²), n. sp.,6345
Prostate, "acid", phosphatase and functional activity,1892
adenoma, testosterone as affecting,14969
carcinoma, diagnosis and metastases,7855
new bone formation,14873
significance of mucus, malignancy and,7849
development and regression, ♀ rat,13042
enlargement, testosterone and estrogens as affecting,4281, 16631
fluid excretion, endocrines affecting,12643
as influenced by:
adrenal,7537
adrenalectomy, castrated mice, 12643
estrone, cat,16993
progesterone, rat,9311
sex hormones,9349, 16991
testosterone after castration,3795
motility, sex hormones as affecting, rat,16622, 16623
phosphatase in, testosterone as affecting, monkey,12957
spindle cell sarcoma,16849
transurethral resection, value,9587
wt. and histology after vasectomy,15023
Prostatitis, chronic, acetylsulfanilamide therapy,9933
Prostemmiulus (p.1873³), n. sp.,5124
Prosthenops (p.1883³), n. spp. (N), 5217N
Prosthenorhynchis (p.1870⁴), in monkeys, and lemur, monograph,3286
Prosthodontom (p.1869²) of east coast N. America,6793
Prosthogonimus (p.1869³), in ducks,1591
macrorhynchis, dragonfly as interm. host,12258
Prostigmine, effect on:
acetylcholine and nicotine action on ganglia,7782
action of mecholyl, man,14829
activity of sloth,12985
blood vessels, man,9558
choline-esterase activity,14458
gastric secretion,2326
myotonia,2312, 11231
pancreatic and submaxillary glands during anesthesia,14801
pharm.,4143
Prostoma (p.1870⁴), taxonomic review of,3288
ethardt, anatomy of,3287
Protadelaidea, reconstruction criticized,12333
Protamines. (See also specific protamines, e.g., *Clupeine*, *Salmine*.)
effect on blood coagulation,1957
on protamine-splitting properties of serum,7346
relation to heparin and tumors, 14884
salts of phosphatides, prep. and properties,8696

Protanopia. (See *Color blindness*.)
 Protargol. (See under *Silver, protein preparations*.)
 Proteaceae (Dicotyledones), p.1865²
 Proteales (Dicotyledones), p.1865²
 Protective coloration. (See under *Coloration*.)
 Proteidae (Amphibia), p.1880¹
 Protein(s). (See also *Nitrogen; Proteinolysis*; various groups of proteins, e.g., *Globulins, Lipoproteins, Nucleoproteins, Peptides, Peptones, Phosphoproteins, Protamines, Proteoses*; and specific proteins, e.g., *Collagen, Elastin, Gliadin, Keratin, Mucin*.)
 absorption, intestinal,5598, 12888
 by lymphatics of nose,864
 of undigested form,2098
 in alfalfa, seeding rate as affecting,1212
 alien, multiplication (?) in tissues,15240
 of ant. pituitary, electrophoresis, 11070
 antibacterial, phenol adsorption by,4651
 azo-, conjugated, anthrax antisera specificity with,851
 enhancing effect on virus lesions,11521
 bacterial formation,6318, 6314
 balance, during suppuration,16554
 of barley, distr. of N in, vars. compared,1174
 in blood. (See *Blood, proteins*.)
 C in, respiration, rhubarb leaves,14020
 carbobenzyloxy-, immunol. and chem. properties,17139
 in cereal breakfast foods, egg replacement value and heat injury to,10947
 in cereals, nutritive value,10955
 chemical and biological nature,16291
 chemistry, book,1883
 review,14440
 complex in different spp. of primates,9746
 concentrates, comparative values for calves,15095
 conjugated carbohydrate-, chemo-immunol. relations,833
 Cu-containing, from *Lactarius*,6613
 in crop plants, N as affecting,15569
 crystalline, vaccinia virus as,15252
 crystallizable, in muscle,13086
 crystallizing in blood and urine, in myeloma,14901
 deaminized, cystine in,9123
 degradation and hydrolysis by pepsin and trypsin,9099
 denaturation, effect on N content,290
 relation to photosynthesis mechanism,4932
 derived, serological behavior and properties,891
 detn., by biuret reaction,9114
 by gastrometric C analysis,9124
 in spinal fluid,1930
 in dist. (See under *Diet*.)
 digestion, oxidation and reduction products of hexoses as affecting liver,9091
 O₂ tension as affecting, liver,9093
 disaggregation by enzymes,4497
 dissociation, fatty acid salts as affecting,7449
 dye-, cellular reactions to,13476
 dynamic effect and net energy value,14524
 effect on circulating leucocytes,9681
 on microchemistry of sugars, in plant extracts,1418
 in egg white,9822
 in electrical tissue,7676
 electrophoretic measurements,12658
 extraction, from muscle,9128
 from seeds, chemistry,19337
 films of denatured, study,1886
 of fishery products, nutritive value,2011
 flavo-, in heart, blood and lenses, catalytic function,16310
 in grass, drying method, effect on feed value,8066
 effect on feed value,17595
 fertilizer as affecting,8460
 N as affecting,17579
 hydrolysates, fractionation by adsorption,12720
 hydrolysis, enzymatic, cosubstrates in,14447
 products, gastro-inhibitory effects in upper small intestine,9270
 hydrolytic products, book,1913

Protein (continued)
 immunological properties, sulphone compounds as affecting,8098
 incomplete, from single cereals, effect on fertility of poultry,15112
 in Indian foods,16463
 intake and distr. in organs and tissues,12643
 in leaf cells, relation to cytoplasm content,4944
 in leaves, value as samples and factors affecting,8589
 lecitho-, prep.,7802
 in legumes of Puerto Rico, feed value,13793
 lipid ratio, in aging and endocrine dysfunction,11352
 liver storage, rat,9264
 metabolism, availability of N-methylated amino acids for growth,12804, 12806
 conversion to glucose in phlorhizinized and depancreatized dogs, 9195
 in inanition,12643
 as influenced by:
 adrenal cortical extract, rat, 12643
 ant. pituitary extracts, 3880, 16624
 carbohydrate,2020
 insulin,3679, 9190
 of injected serum, rat,9186
 in mammary gland, goat,14684
 nitrogen isotopes in study,7423
 in plants,14022
 book,14021
 during pregnancy and lactation, rat,7598
 review,14440
 rôle of carbohydrate in,7429
 in microspore granules, *Tradescantia*,8597
 in milk, dairy breed comparison, 15110
 detn. of bacterial action on, technic,4698
 estimation from fat %,15108
 from fasted cows,13362
 solubility in salt soln.,13373
 variation through lactation period,4414
 molecular structure, studies,12656
 monofilms of complex, antibody-antigen specificity oriented by,17125
 multilayers, deposition,16295
 in muscle, study,9496
 nitrated, serological relations,8138
 non-antitoxic, enzymatic digestion,17188
 nutritive value,7403
 parenteral digestion, in bacterial infections,4492
 passage from vascular system into joints and other body cavities,14495
 in pasture plants, (NH₄)₂SO₄ as affecting,4853
 -phosphoric-acid-chaulmoogra compounds, prep. and comp.,4575
 in plants, amino acids and S distr. in,6608
 as index to metabolism,15738
 S distr. in,6607
 pollen extract skin-reactive substance as,15128
 polymerization, relation to growth of meristems,1873
 in potato, minerals as affecting,13910
 precipitation with complex salts, 16361
 of ragweed pollen, chemistry and immunology,2542
 requirements, bacon pigs,15102
 dairy cattle,11495
 pigs,11477
 poultry,8095
 for sheep,16484
 resistance to proteolysis during development of sarcoma,9096
 of rice and by products, value,14529
 rôle in animal nutrition,11474
 sensitivity. (See *Allergy*.)
 in serum. (See under *Blood, proteins*.)
 soln., CaCl₂ detn. in,14483
 as source of carbohydrate for patients using protamine Zn insulin, 2030
 from soybeans, extraction and food value,1213
 hardening and use for plastics, 11934
 plasticization,11935
 specific, detn. in antisera,13393
 specific dynamic action. (See *Specific dynamic action*.)
 split products, absorption from isolated colon loops,7521
 structure, review,9167
 substitute, amides as, pigs,8071
 amides and urea as, cows and sheep,8088

Protein (continued)
 substitute (continued)
 in dairy ration, NH₄HCO₃ as,17087
 glucose-ureid as, pigs,8070
 sugar, detn. in blood,16400
 sulphhydryl groups in,7284
 sulphur distr. in,1927
 synthesis, in alfalfa,1183
 from amino acids, water as affecting,8590
 during development of *Urechis*, 17065
 in leaves, light quality as affecting,8591
 by liver, review,294
 by oat roots, nitrate and glucose as affecting,10328
 in paunch of sheep,11488
 in plants, light as affecting,1396
 K as affecting,15743
 by proteases,10331
 in protein-proteinase digests,196
 tuberculo-, effect on normal vs. tuberculous animals,912
 hypersensitivity to, without infection,900
 reactions to tuberculo-lipids vs., 901
 Seibert's derivative, modification,2592
 tyrosin reaction, in malaria diagnosis, technic,6753
 ultra-violet radiation as affecting, 5467
 in urine. (See under *Urine*.)
 virus, constitution,17792
 crystallization,17780
 mol. wt. detn., from X-ray diffraction,8169
 of potato latent mosaic, properties,3126
 relation to visible cell inclusions,6644
 reproduction, theory,17786
 of tobacco dark green mosaic, properties,6658
 of tobacco mosaic compared with normal leaf constituents,4975
 hexagonal crystals,15824
 mol. structure,15834
 N constitution,8130
 particle size,8127
 and viscosity,8125
 physicochemical properties, 15826
 properties,3169
 viscosimetric studies, 15822, 15823
 of tobacco ringspot, isolation and properties,15830
 of tomato bushy stunt,4974
 crystal structure,4976
 ultraviolet absorption spectra, 17783
 viscous, purification of antisera from,15412
 in wheat, fertilizer as affecting,8452
 N and P as affecting,15543
 from whey, recovery,11498
 Protein-silver preparations. (See under *Silver*.)
 Proteocephalidae (Platyhelminthes), p. 1870³
 Proteolysis. (See also *Amino acids; Peptides; Peptones; Protein*; and *pepsin, protease, and trypsin* under *Enzymes*.)
 by *Beauveria* spp.,970
 cosubstrates in,14447
 of diphtheria antiserum protein fractions,17180
 of tetanus antiserum, effect on antitoxic power,17179
Proteomyces (p.1868³), included in *Trichosporon*,4645
 Proteose, allergenic fraction of cottonseed as,13490
 Hammarsten's, identity,13366
Proteosoma. (See *Plasmodium*.)
 PROTEUYNOTUS (Pisces)(p.1879³)8813
Proteus, -*Corynebacterium* association, discoloration of sour-milk cheeses due to,6276
 diketocholanic acid synthesized from dehydrochloric acid by, 10087
 isolation of intestinal bacteria in presence,11634
 murine-typhus, culture,8190
 nondialyzable products, specificity,2547
 in urogenital tract infections, 15263
 chandleri, assoc. with *Cochliomyia americana* infection,12220
 morgani. (See also *Salmonella morgani*.)
 in colon group,17464
 OX₂ serological relation to *Rickettsia canis*,8218
 vulgaris. (See also *Bacillus proteus; Bacillus proteus*.)
 creatinine production by, precursors to,6305

SUBJECT INDEX

Prothallium-Pseudomelania

- fish epidemic due to.....15375
growth on ammonium lactate + nicotinic acid.....4712
peptidase.....2749
proteinases.....15424
serological comparison of non-dialyzates with typhus sera.....2547
- Prothallium.** (See under *Gametophyta*.)
PROTHALLONEMA (Nematoda) (p.1870^a)
dubium.....15995
Prothrombin. (See *Thrombin*.)
PROTOABSIDIA (Fungi) (p.1861²) *blakesleana*.....6354
Protoblastenia (p.1862¹), new species.....6364
Protocalliphora (p.1878¹), sp. in golden eagle nest.....1564
Protoceratopsidae (Reptilia), p.1881²
Protococcales (Algae), p.1860¹
Protococcus, algal complement of lichens, on mosses.....13741
Protepidodendron (p.1863⁴), in Devonian, N. Y. and Penna.....13716
Protomastigida (Protozoa), p.1868¹
Protomycetaceae (Fungi), p.1861²
Protonotaria (p.1882²) *citrea*, territorial defense in, behavior.....7032
Protoparce (p.1876³), life history, enemies, and control.....5030
on tomato, control.....3189
secta, parasitized by *Apanteles*.....5067
on tomato, life history, enemies in Florida, control.....5035
- Protopectin*. (See *Pectin*.)
Protophyllolacudus (p.1864²) † *subintegrifolius* (K), from Minnesota.....17476
Protoplasm. (See also *Cell*; *Cytoplasm* and cell components, e.g., *Chromosomes*, *Golgi apparatus*, *Mitochondria*, *Nucleus*, *Vacuoles*, *Vacuome*, etc.)
alpha particles as affecting.....15752
bioelectric potentials, O₂ as affecting.....3095
changes in apparent ionic mobilities, *Nitella*.....10311
coagulation by heat, time required for, algae.....15722
colloids, electric charge.....7252
continuity. (See *Plasmodesma*.)
disorganization by cold, factors affecting.....3087
elasticity, ions as affecting, *Spirogyra*.....17691
temp. as affecting.....10308
fat in, ultraviolet as affecting.....1902
gel- and fiber-forming component.....173
micellar surfaces, blocking by alkaloids.....10848
permeability. (See *Permeability*.)
physical nature.....7092
streaming, and food vacuole movement, ciliates.....3264
hydrostatic pressure as affecting, *Elodea*.....6580
mathematical biophysics.....5434
in phloem of conifers.....15517
relation to auxin translocation, 1356
use of berberin sulphate in study.....15749
structure.....178, 179
and elasticity, *Spirogyra*.....10308
micellar concept.....17689
use of x-ray in study.....3103
viscosity. (See *Viscosity*.)
Protorthoptera, p.1875¹
Protospirura (p.1870³) *marsupialis*, ♂ described.....14214
muricola, in captive monkeys, life history.....15955
numidica, syn.....15999
Protostrongylus stilesi, pneumonia of Rocky Mountain bighorn sheep due to.....4678
Protostrongylus (p.1876³) *dianthi*, on carnation.....6882
Prototheca (p.1860²) *portoricensis*, dissociation.....6327
PROTOTRETA (Brach.) (p.1871¹) *trapeza* (Cm).....6818
Protozoa (p.1868¹). (See also *Ciliata*; *Flagellates*; etc.)
acclimatization to osmotic pressures of media.....7253
anoxia and low O₂ tensions as affecting.....12643
autotrophic N metabolism, *Chilomonas*.....3256
biological effects of crowding.....9000
blood parasites, strains for.....1584
of caecum of horse.....4671
cell reorganization in hunger.....3259
crystalline inclusions.....3254
formalin preservation as affecting, 136
flagellum structure in.....1586
- food vacuoles, movement, ciliates, 3264
origin and function, *Flabellula*.....3261
freshwater and marine, function of contractile vacuole in.....15977
growth regulators for.....4714
immunological relations, of *Leishmania*.....15175
of *Plasmodium*.....943, 2607
.....6128, 6129, 8169
.....8188, 9912, 9915
.....11571, 13532, 13533
.....13536, 15154, 15178
of *Trypanosoma*.....945, 4544
.....4545, 4546, 9908, 9909
.....9910, 9911, 15177, 17238
infections, ultra short waves as affecting.....1557
intestinal, dangers, in sub-tropics, 6723
diagnosis, efficiency.....17895
distr. of *Giardia* in intestine, rat, 1533
effect on erythrocyte sedimentation rate.....1540
role in cellulose utilization by termites.....7185
survey, Cuba.....6720, 6748
Florida.....14162
Havana.....6741, 14192
Indiana.....14176
Saskatchewan.....17905
in liquid media, volumetric estimation of populations.....6764
nuclear division, in *Dientamoeba*.....5105
nutrition, pyrimidines as stimulating growth.....1532
Or-consumption, measurement and date, *Coldipidum*.....5100
parasitic, chap. in manual, 10498, 14164
clinical discussion.....3238
evolution.....8899
in man.....1547
pathogenic, cantharides blister for detecting.....13625
demonstration by fluorescent dyes.....11575
in plankton, as indicator of stream pollution.....993
reproduction, crowding as affecting, *Mayorella*.....5104
in cultures, substance controlling.....5103
in old culture medium, *Paramecium*.....5102
in soil, E. Greenland.....14200
of Italy.....3255
staining technic.....5261
survival in liquid helium.....4659
water purification by.....10020
Protacheoniscus (p.1873⁴) *habori*.....8750
Protremata (Brachiopoda), p.1871²
Protula (p.1871¹), syn.....17962
tubularia, reflexes in.....462
Protura, p.1875¹
Protzia (p.1874¹), n. spp.....10583
Provenance, of belladonna, effect on atropine content.....6561
expts. with *Pinus silvestris*.....3034
problems, in Norwegian forestry, 15642
relation to phototropism, in seed testing.....8937
of spruce seed in Sweden.....8525
Prune. (See also *Prunus*.)
brown rot (*Sclerotinia*), in California, control by cyanamid soil treatment.....10343
.....10374, 17834
drought spot, due to B deficiency, 15835
injury by *Metatetranychus*, control, 5018
Prunella (p.1882²), bird banding.....14296
Prunellidae (Aves), p.1882²
Pruning. (See also *Silviculture*.)
of apples, Kansas.....15606
of blueberries.....17622
of forest trees, to combat storm damage.....12166
of grapes.....3003, 15608, 17626
of pecans, vs. thinning the stand 13909
of raspberries.....15591
Prunus (p.1865¹). (See also *Stone fruits*; and under the several fruits, viz., *Almond*; *Cherry*; *Plum*.)
tax.....15486
n. spp. (N).....17475, 17478, 17479
chromosome number and behavior.....16153
cross fertilization, relation to pollen-tube growth.....8507
in dung of ground sloth.....7048
hormones in, seed and seedling.....12072
leaf roll, temp. as affecting.....13871
Macropis trimaculata on.....10390
rust (*Transschelia punctata*), California spp. as hosts.....14085
armeniaca. (See *Apricot*.)
effect on *Lecanium* morph.....3347
- avium, self-sterility and pollinators for.....11976
cerasus var. *Montmorency*, fruit, hist.....15525
domestica. (See *Prune*.)
emarginata, *Taphrina flectans* on.....6351
kansuensis, characters and hybrids of.....11982A
persica. (See *Peach*.)
serotina, leaf spot (*Oocomyces*), control.....12160
Psacalium (p.1867¹), tax.....13751
Psaldus (p.1876³), syn.....3333
Psalliotia campestris, nematodes, arachnids and insects on, bibl.....8646
Psallus (p.1875²) *seriatus*, control.....5026
dispersal by air currents.....5029
egg parasites of, *Anaphes* and *Erythemelus*.....12230
Psaltiriparus (p.1881⁴) *minimus dimorphicus*.....1650
Psammochinus (p.1872²) *milharis*, development after constriction of cells during cleavage.....9788
eggs, metabolism during fertilization reaction.....11462
Psammomys, plague susceptibility, in Tunisia.....999
Psammophytes. (See also *Dune*.)
photosynthesis in.....12082
Psammosolen (p.1872²), n. sp.....6828
Psathyrella (p.1862⁴) *sphagnicola*, n. comb.....2801
Psectrocladius (p.1877³), n. sp.....6889
Pselaphidae (Coleoptera), p.1876¹
Pseudacontine, from *Acontium* spp., use in hunting.....8559
PSEUDANGULARIA (Platyh.) (p.1870⁴)
n. spp.....6785
Pseudechis porphyriacus, venom, action and treatment.....5164, 14859
effect on blood clotting.....875
Pseudemys (p.1880³), flicker response in.....7628
scripta, brain, nuclei of pretectal region, troostii, two headed, anatomy.....5963
Pseudopneumata (p.1877¹), n. sp.....14254
Pseudanthemum (p.1867¹), n. sp.....6437
PSEUDEKOECHIS (Platyh.) (p.1870³)
major.....6803
Pseudione (p.1873³), n. spp. on gills of *Calikanassa*.....12321
Pseudobornia (p.1864¹) † *urina* (D), in E. Prussia.....10097
Pseudocentrotus depressus, eggs and sperm, as influenced x-, v- and β-rays.....12699, 12705
Pseudoceridae (Platyhelminthes), p.1869²
Pseudoceros (p.1869²), of east coast N. America.....6798
Pseudochelaria (p.1877²), resurrected.....16040
PSEUDOCHELOANTHENIA (Platyh.) (p.1870⁴) *collocaliae*, from *Collocalia*.....6786
PSEUDOCLETTAMIA (Dipt.) (p.1877¹)
n. sp.....14254
Pseudococcus citri, puncture secretion, simulating trabeculae.....13780
PSEUDOCROBELES (Nematoda) (p.1870¹).....16000
Pseudocyclocladus † *lituus* (K).....17925
PSEUDODIAPYCNALLOUS (p.1873³), n. subgen. of *Pseudodiptomus*, 17969
Pseudodiptomus (p.1873³), n. spp., 14235
.....17969
Pseudogamy, in *Ranunculus*.....3514
Pseudogaurax (p.1877¹) *signata*, parasite of *Latrodetes* eggs.....5069
Pseudoglobulin, antitoxic, disaggregated by fibrinolysin.....4497
carbohydrate of equine, non-specific nature.....2524
PSEUDOHIAUTULA (Fungi) (p.1862⁴), subgen. of *Mycena*.....11825
Pseudots (p.1883¹) *nahoor*, autecology, in Szechwan.....5223
Pseudolembosia (p.1861⁴) *magnifica*, on *Eucalyptus*.....8407
PSEUDOLEPIDAPEDON (Platyh.) (p.1869³) *paralichthydis*.....6803
PSEUDOLEPIDOPILUM (Bryophyta) (p.1863³) *virens*, transf. from *Lepidopilum*.....11839
Pseudoleiskeia (p.1863⁴) *illyrica*, spp. confused with.....4751
PSEUDOLIMNOCYTHERE (Crust.) (p.1873²), n. sp.....6846
Pseudolipidium (p.1861²), limits.....15461
morph. and life hist.....10115
Pseudolucanus (p.1876²) *capreolus*, n. forms.....8764
Pseudomelania (p.1872²) relation to *Trajanella*.....16008

- Pseudomelanidiidae* (Mollusca), p.1872²
Pseudomonadaceae (Bacteria), p.1861¹
Pseudomonas (p.1861¹), as food for *Colpoda*, 6772
in hen's eggs, CO₂ as affecting, 10043
systematic position and type sp., 15413
in urogenital tract infections, 15263
aeruginosa. (See also *Bacillus pyocyaneus*; *Pseudomonas pyocyanea*.)
in bovine mastitis, 6227
in milk, public-health and economic significance, 6227
cerasus. (See *Phytomonas cerasi*.)
fluorescence, ammonia and amino-N production vs. electrical conductivity, 2745
peptidase, 2749
proteinases, 15424
mephitica, skunk-like odor in butter due to, 6274
mors-prunorum, bacterial blight of cherry due to, England, 3117
prunicola, bacterial blight of cherry due to, England, 3117
punctata, carp infection and agglutinin formation by, 8165
in inflammation of swim bladder of fish, 623
pyocyanea. (See also *P. aeruginosa*.)
bacteriophage, as influenced by surgical dyes and antiseptics, 17283
increase of *Shigella* dysentery-induced fever by minimal amounts, 9878
radicicola. (See *Rhizobium leguminosarum*.)
tumefaciens. (See also *Phytomonas t.*)
in apple and pear propagation, control, 10354
virulence of different strains, 8605
Pseudomycoderma (p.1863³), tax., 4638
review, 15469
PSEUDOMYSIDIA (Hom.) (p.1875⁵), n. sp., 8785
Pseudoneura (p.1863³), spp. transf. to *Riccardia*, 4752
Pseudoperonospora (p.1861²) *cubensis*, hosts, 1449
on *Trichosanthes*, 12121
Pseudopeziza rilus, on black currants, fertilizers as affecting, 3008
PSEUDOPHAENOCORA (Platyh.) (p.1869⁴) *sulfophila*, 8730
Pseudophloeus (p.1875⁵) *angustus*, redescription, 14259
Pseudophyllidea (Platyhelminthes), p.1870²
PSEUDOPINANGA (Monocot.) (p.1864⁴), n. spp. and n. comb., 15487
PSEUDOPLAGIOPOEUS (Platyh.) (p.1869⁴) *lethrinus*, 6803
Pseudopleuronectes (p.1879⁶), aberrant specimen, 3375
PSEUDOPLOESOMA (Rot.) (p.1871⁴) *formosum*, 6807
Pseudopotamilla (p.1871⁴) syn., 17962
Pseudopracanthus (p.1880⁴) *altus*, in Gulf of Maine, 5157
PSEUDOPROREHYNCHUS (Platyh.) (p.1869⁴) *synodi*, 6803
Pseudorabies, review, 13592
vaccine, tissue cultured, 15225
virus, absence in brains of inoculated animals, 18590
culture on chorioallantois, 9942
tissue culture, 11612
..... 18555, 18550, 15225
Pseudorasbora parva, *Clonorchis* in, 17932
Pseudorca (p.1883²) *crassidens*, physiology of reproductive system, 8859
Pseudosaccharomyces (Fungi), p.1863³
Pseudosalmoneella (p.1861²) *dysenteroides*, from feces of children in dysentery epidemic, 17378
Pseudosida (p.1873³), species endemism, 12319A
Pseudomitria (p.1877³) *trilobata*, larva and pupa, 14258
Pseudosuccinea columella, infection with cercariae, 17946
Pseudosuchia (p.1880⁴), new genus (PARRINGTONIA) in, East Africa, 10684
Pseudotrypanaria (p.1861⁴), n. spp., 17499
PSEUDOTRICHIA (Fungi) (p.1861⁴)
..... 15453
Pseudotsuga (p.1864³), tax., 2823, (N) 17475
mucronata, hardness of needles, relation to composition, 3086
insect pests of, Idaho, 10427
tazifolia, *Arthrobotrys* on, 17489
leaf cast, due to *Phaeocryptus gawmanni*, 14048
name for Douglas fir, 11853A
Psilochasmus longicirratu, in *Anas rubripes*, Canada, 1590
Psilophyta (Pteridophyta), p.1864²
Psilophyales (Pteridophyta), p.1864²
Psilophyton (p.1864²), dist., 13716
from Greenland (D), 3235
Psilosis. (See *Sprue*.)
Psilotaceae (Pteridophyta), p.1863⁴
Psilotales (Pteridophyta), p.1863⁴
Psilotum (p.1863⁴), embryo and rhizome, 13784
triquetrum, distr. in India, 4755
Psittacidae (Aves), p.1881³
Psittaciformes (Aves), p.1881³. (See *Parrots*.)
Psittacosis, in Brazil, 17288
bronchopneumonia-like, virus-induced, in man and stormy petrels, 4589, 4600
carriers, 8310
elementary bodies as etiologic agent, 15237
human infection, avian sources, 8280
latent avian, complement fixation test with tissue-culture antigens, 13453
outbreak in zoo attendants, 8310
virus, antigenicity and serological relations, 15237
avian hosts, 954, 8280
conc., filtration and particle size, 15236
tissue culture, 15235
Psocid, control in dwellings, 14101
Psocoptera (p.1875⁵), (See *Corrodentia*.)
Psophodes (p.1881⁴) *nigroregularis* subsp., description, field notes, and eggs of, 14298
Psoriasis. (See under *Dermatosis*.)
Psorophora (p.1877³), larva, 12374
in rice fields, Ark., 12227
Psychiatry. (See also *Psychoses*.)
new periodical, 5280
Psychidae (Lepidoptera), p.1877²
Psychodidae (Diptera), p.1877³
Psychology. (See also *Behavior*.)
abnormal, relation to biology, 10673
exptl. methods, book, 7626
physiological, review, 7244
Psychoses. (See also *Neuroses*; *Psychiatry*.)
book, 653
brain potentials in, cyanide as affecting, 461
cardiazol convulsion therapy, 7908
catatonica, production by urine components, 5489, 5659
choline esterase in serum in, 7558
dementia praecox, anthropoid malaria as affecting, 12264
catatonogenic properties of blood serum and spinal fluid in, 10938
depressive patients, changes in daily curve of work capacity, 2248
diagnosis, Lange gold sol reaction in, 8616
etiology, rôle of heredity and constitution in, 2458
glycolytic and glycogenolytic enzymes in brain and blood, 3559
and heart disease of unknown origin, 14758
incidence and future expectancy, 2409
as influenced by:
adrenal cortical extract, man, 3858
insulin shock therapy, 4270
nasopharyngeal sepsis, 4230
inheritance, 5359
insane patients, echinostomiasis in, Java, 17911
interstitial granular cells of choroid plexus and, 5868
involutional melancholia, estrogens as affecting, 9639
law for prevention of hereditary, 8471
marhuana, study, 14792
nutritional deficiencies and, 2004
organic vs. functional origin, 7905
in osteomalacia, etiology, 2411
presenile, Pick's path., 16942
relation to cardiovascular disturbances, 2415
in schistosomiasis, treatment, 15961
schizophrenia, accessory movements in, 4054
acute anoxia as affecting, 655
anoxic and insulin shocks as affecting, 4299
blood in, exercise as affecting, 12798
blood lipids in, insulin therapy, 16430
cardiazol therapy, electrocardiogram in, 14774
convulsion therapy, endocrinological relations, 4296
cortical atrophy, localization by electroencephalography, 7915
etiology, 2412
anat-path., 4295
insulin shock, brain metabolism and potentials, 7910
effect on cerebrospinal fluid, 7917
on pulse and blood pressure, 16726
electrocardiogram in, 16722
surface tension of serum, 7916
N inhalation therapy, 12643
sudden "brain death," path., 16943
tuberculosis and, review, 2416
urinary thyrotropic activity, 14966
senile, hist., 16939
skin impedance in, 9665
sleep motility in, 9447
spiograms of nervous states, 243
sulfate pattern in, 7621
sulfanilamide associated, 17269
syphilitic, treatment with virus of tsutsugamushi disease, 7659
Psychosomatic Medicine, new periodical, 7088
Psychotria (p.1867³), n. spp., 2828A
..... 6431, 6437
Psylla (p.1875⁴) *nana*, 1631
Psyllium. (See also *Plantago*.)
fed rats, urea excretion by, 13178
Pteridium (p.1863³), spp. tracheal elements, 17552
Pteridophyllum (p.1865⁵) *racemosum*, anatomical note, 2906, 11884
Pteridophyta, p.1863³. (See also *Ferne*.)
apogamy, apospory and parthenogenesis in, review, 17561
phylogeny, 4722
quotient for Japanese Islands, 3505
sporophytes in *Equisetum*, 17562
Pteridospermophyta (Gymnospermae), p.1864¹
morphology, 8369
Pteris (p.1863³), n. spp., 1097
Pterispermotrobus (p.1864¹) *striatus* (Ob), 8369
Pterocetus verreauxi, new tapeworm from, 15987
Pterocarpus (p.1866²) *draco*, validity, 11873A
santalinus, santalin from, chemistry, 12035
Pterocarya, wood anatomy, 17527
Pterogenia (p.1877⁴), n. sp., 14254
Pteromalus, sex determination in, compared with *Habrobracon*, 8950
Pteronarcys (p.1875⁵) *proteus*, early development, 9793
Pteronys (p.1878³) *pini*, biol. control, 1510
Pteropodidae (Mammalia), p.1882²
Pterostichus (p.1876⁴) *chalcites*, feeding on June beetle eggs and grubs, 10454
Pterotheca falconeri, *Puccinia* on, 8409
Pterygotergidae (Myriopoda), p.1878⁴
Pterygotergum (p.1878⁴), morph., 16012
Ptilinopus (p.1881³), n. subsp. in, 7022
Ptilocera (p.1878³) *fastuosa*, ssp. new, 5135
Ptilodactyla (p.1876²), n. sp., 3329
luteipes, in greenhouse, 6850
Ptilonrhynchus violaceus, bower-painting habit, 18062, 18077
Ptomaines. (See specific *ptomaines*, e.g., *Choline*.)
Ptyastorchis (p.1870⁴), synonymy, 15990
Ptychanatis azyridis, elytral spot morphology, 3334
Ptychococcus (p.1864⁴), n. spp. and n. subg., 11864
Ptychodes (p.1876³) *trilineator*, in Louisiana, life hist. and control, 6694
Ptychosperma (p.1864⁴), tax., 10121, 11860
Puberty. (See *Sex*, maturity.)
Public health. (See under *Health*.)
Publication, of biological papers, suggestions, 1689
books, comparative costs, 5279
of works of scholarship, analysis of costs, 3433, 3436, 3437
Puccinellia (p.1864³), n. spp., 2835
Puccinia (p.1862³), n. spp., 6345, 8409
..... 17498, 17500
Arctic spp., shortened life cycle, 8396
nuclei, structure and behavior, 17494
anomala, physiologic races, in Europe, 6628
antirrhini, on snapdragon, resistant vars., 3169
asparagi, on asparagus, control by spraying, 12154
coronata, longevity of urediospores, 3169
on oats, effect on cold resistance of host, 17818

SUBJECT INDEX

Pucciniaceae-Quercus

- epidemiology in Louisiana, 15848
new physiologic form, 3143
glumarum, resistance, tests with barley,
wheat and rye, in Pacific North-
west, 3138
graminis, on barley, resistant var., 6674
avenae, on oats, effect on cold resis-
tance of host, 17818
physiologic specialization, in Würt-
temberg, 15854
tritici, epidemiology in Mexico, 3169
overwintering of urediospores,
15810
resistance to, in Blackhull wheat,
15856
on wheat, brown necrosis in re-
sistant vars., 14083
effect on seed vitality, 10370
parkeri, range, hosts, morph., 6357
schedonardii, on cotton, in Arizona,
15889
tritici, inheritance of resistance to,
in wheat, 3456
on wheat, effect on yield and baking
quality, 1479
pathogenicity as affected by light,
17822
sources of inoculum for fall infec-
tion, 3169
time-temp. relations, 15842
Pucciniaceae (Fungi), p.1862²
Pucciniales (Fungi), p.1862²
Puddle(s), thermal stratification, 12613
Pueraria. (See also *Kudzu*.)
Puerperal fever, streptococcus types in,
4490
Puerperium. (See also *Parturition*; *Preg-
nancy*.)
acute hypophyseal necrosis and, 16927
Puffinus (p.1881¹), food habits, 9064
griseus, in California, 5207
kuhlth borealis, in France, 16090
tenuirostris, olfactory organ, embryology,
4384
vitamins in stomach oil, 9216
Pugettia (p.1874⁴), tax., 1616
PUKALOA (Moll.) (p.1872³), n. spp., 5114
Pullorum disease. (See also *Salmonella
pullorum*.)
serodiagnosis by rapid whole-blood test,
13663
whole blood vs. standard tube agglutina-
tion tests for, 2715
Pullularia pullulans, needle blight of pine
associated with, 15803
Pulmonary. (See *Lung*; *Respiration*,
alveolar.)
Pulmonitis, diet relations in laboratory
animals, 2521
Pulpwood. (See *Paper*; *Wood*.)
Pulse. (See also *Blood pressure*; *Circula-
tion*; *Heart*, *rate*.)
absent, in upper extremities, in aortic
arch aneurism, 13127
alternans, electrocardiogram, 11161
curves, in detn. of stroke volume, 13107
pressures, relation to distensibility of
aorta, 4099
standing waves of aorta, 4070
tracings, during artificial hyperpyrexia,
12643
venous, recording and phonocardi-
graphic tracing, 14772
vol. peripheral, irritation of vein and,
13106
vol. and pressure, peripheral resistance
as affecting, 12643
wave velocity, aortic, dog, 4060
in Valsalva expt., 13135
Pulses. (See *Legumes*.)
Pumelo. (See *Grapefruit*; *Citrus*.)
Pumpkin(s). (See also *Cucurbita*.)
prochlorophyll in seed, light as af-
fecting, 12086
soft rot (*Pythium ultimum*), 8603
Pungitius, biology, 10814
Punica granatum. (See also *Pomegranate*.)
Pupil. (See under *Eye*.)
Pupipara (Diptera), p.1878¹
Purgatives. (See *Cathartics*.)
Purine(s). (See also *Allantoin*; *Guanine*;
Nucleoproteins; *Uric acid*; *Xanthine*;
etc.)
Purposiveness, in biology, 5255, 12461
Purpura, splenic autolysis, 11311
splenic P content, 11312
thrombocytopenic, blood clot in, 11309
discussion, 1968
path. anat., dog, 7887
platelet reducing substance in spleen,
1995
Purpura (p.1872²) *lapillus*, biology, 3302
3303
Purpureicephalus (p.1881³) *spurius*, origin,
generic relations, and plumage of,
Western Australia, 5199
Pus, antigens common to Brown-Pearce
tumor and, 813
to tumors and tuberculosis and, 814
bacteria inducing, granulation-tissue
resistance to, 2588
blood polypeptides in, 16411
serol. specificity, in different animals,
6042
of sinuses, *Actinomyces* spp. from, 9975
Pustular fever, *Rickettsia*, tissue culture,
4582
Putorius. (See *Ferret*; *Mink*.)
PYCNADENOIDES (Platyh.) (p.1869³)
pagrosomi, 6803
Pycnodoria (p.1863³), n. sp., 6376
Pycnogonida, p.1874⁴
Pycnonotidae (Aves), p.1881⁴
Pygeus (p.1864³) *wallyi*, 2882
Pyelitis, sulfapyridine therapy, 9981
Pyelonephritis. (See *Nephritis*.)
Pyemia, bacterial content of spleen in,
2538
Pyknosis. (See *Chromosomes*; *Meiosis*;
Mitosis; *Nucleus*.)
Pylaitia (p.1863⁴), in Japan, 6373
Pyloric stenosis. (See under *Stenosis*.)
Pylorus. (See under *Stomach*.)
Pyocyanin. (See under *Pigments*.)
Pyorrhea. (See *Gingivitis*.)
Pyraacantha, *angustifolia* × *Gibbsi*, resistant
to fire blight, 15863
Pyralidae (Lepidoptera), p.1877¹
Pyramidon. (See *Aminopyrine*.)
Pyranometers, thermoelectric, for mea-
suring biological radiation, 16243
Pyrausta (p.1877³) *nubilalis*, control, 8641
8644, 12229, 17863, 17883
developing 2d generation, 10418
fumigation with vacuum and HCN,
10467
hosts and damage in Poland, 1494
on hybrid maize, resistance to, 10417
number of generations and food
plants, N. J., 17867
ratio of no. per plant to no. infested
plants, 14120
2nd generation, and overwintering,
Ind., 12189
strain of sweet corn resistant to,
17876
Pyraustinae (Lepidoptera), p.1877²
Pyrazoline. (See *Antipyrine*.)
Pyrene, effect on growth of tumors in
mice, 584
Pyrenochaeta (p.1862²), n. sp., 15453
sacchari, on sugar cane, 1311
Pyrenodesmia (p.1862³), new species, 6364
Pyrenopeziza (p.1862³), n. spp., 15453
Pyrenophora (p.1861⁴), n. sp., 15453
Pyrethrin, in *Chrysanthemum cinerariae-
folium*, fertilizer as affecting, 6474
toxicity to invertebrates, 4103
Pyrethrum, inactivation in body of army
worm, causes, 6714
as insecticide, apparatus, toxicity and
biological assay, 17885
for apple insects, 10400
for clover leafhopper, 17880
for cranberry leafhopper, 6692
for 6-spotted leafhopper, 12199
for strawberry leafroller, 10396
for sugar-cane froghopper, 14147
as repellent for biting flies, 10437
oil, protective films to control storage
insects, 8192
spray, resistance to, *Stomoxys* and
Musca, 5073
Pyrethrum, culture and curing, Kenya,
3042
Pyrgomorpha (p.1875¹), n. sp., 3366
Pyridine, antistaphylococci properties,
15367
-β carbonic acid diethylamine. (See
Coramine.)
compounds, carcinogenic activity, mice,
13207
methemoglobin formation from, 10927
substances in nutrition, vit. B and,
14559
Pyrimidine(s), effect on growth of flagel-
lates, 1582
on growth of plants, relation to
vit. B₁, 6591
Pyrogallol, effect on epinephrine action,
11211
on retractor penis, dog, 7783
Pyrogen, bacterial production in gum
acacia, 15267
in syphilis therapy, 8186
in typhoid vaccine, study, 13504
Pyrolaceae (Dicotyledones), p.1866⁴
Pyropolyporus (p.1862³), new species, 6353
Pyroxylin. (See *Collodion*.)
Pyrrhula (p.1882²) *p. nesa*, bird banding,
14296
Pyrrhocomia (p.1867⁴) *n. syn.*, 1158
Pyrrrole, effect on oxidation of amines and
amino acids by liver suspension,
206
Pyronympha (p.1868¹), mitosis in, 10516
Pyrus (p.1865⁴). (See also *Apple*, *Malus*;
Pear.)
tax., 15486
chromosome number and behavior,
8910
communis. (See *Pear*.)
malus. (See also *Apple*; *Malus*.)
hormones in, seed and seedling,
12072
Pyruvate, effect on liver metabolism, 5529
Pyruvic acid, bakers' yeast utilization,
2732
detn. in blood, 7306
effect on heart, 7707
katabolism, by barley kinetics, 10324
metabolism, by animal tissues and
bacteria, 1909
in avitaminosis B, 9628
in retina and chick embryo, 10982
oxidation in brain, 282
specific dynamic effect, 5530
Pyruvic aldehyde, hydroxy-, metabolism of
alcoholate of trimer, rat, 3685
Pythium (p.1861³), causing blossom-end
rot of watermelon, 10342
causing rootrot of wheat, research
on, in Canada, 17758
on cereals, root growth and injuries
as factor, 10348
disease of *Begonia semperflorens*, 1482
morph., 10342
aphanidermatum, causing rootrot of
cucurbits, 14040
arrhenomanes, on milo, varietal resis-
tance, 14081
on wheat, salicylic aldehyde predis-
posing to attack, 12144
completens, rootrot of *Durio* due to,
12127
debaryanum, antagonism of *Penicillium*
to, 4997
causing rootrot of *Ranunculus*, 17761
constant renewal of cultures, 17849
ultimum, pathogenicity to various vege-
tables, 8603
Pyura (p.1878⁴), tax., distr., 6946
Pyridium (p.1868⁴) *aselli*, food vacuoles,
movement, 8264
Pyxinoides (p.1868⁴), n. spp., 6766

Q

- Q-fever, Australian, compared to tick-
transmitted Montana infection, 17285
bandicoot as reservoir, 8196
laboratory infections by, 8210
mites as possible vectors, 8210
relation to virus from ticks, 4585
Rickettsia burneti as cause, 8195
Rickettsia, factors in appearance in mice,
8193
Quadrastipidiopsis (p.1875²), n. sp., 10605
QUADRIPILOTARIA (Nematelminthes)
(p.1870³) *dolichodermis*, from magpie,
17961
Quadruplets. (See *Births*, *multiple*; *Twins*.)
Quail. (See also *Colinus virginianus*.)
age detn. by plumage, 14434
description and life history, 8840
eggs, artificial incubation, 14437
equine encephalomyelitis susceptibility,
1018
fire ant as pest, control, 3541
Hexamita from, 15964
life, book, 1645
nose picking cannibalism, control, 9063
populations, hawks as predators, 5414
Quantum biology, examples, 8868
Quarantine, and fumigation for diseases
brought in by shipping, 10013
Quarter evil. (See *Clostridium chauvei*.)
Quasimodia, critical notes, 3307
Quebracho, in nicotine insecticides, value,
17883
Quedius (p.1876¹), key to larvae, 17998
Quenselia (p.1879⁴), sensory papillae, 3391
Quercitrin, effect on dinitrophenol action
on metabolism, 7773
on hyperthermia due to dinitrophenol,
rat, 7772
pharm., 4154
Quercus (p.1865²). (See also *Oak*; *Acorns*.)
tax., 2828A, 2879, 6381
8444, (N)17475
Asterolecanium on, 14263
galls caused by aphids, 8648

Quercus (continued)

- limits of *Erythrobalanus* and *Leucobalanus* sections,17543
ceris, natural regeneration in Saxony,9038
alex, forests in France,7198
laurifolia, bark disease resembling citrus psoriasis,17802
pedunculata, former distrib. in Switzerland,15604
robur, *Lyctus* attacking, relation to starch content,5052
white-variegated green-nerved, off-spring of,68
Querquedula (p.1881²) *discors*, ecology and management,10815
Quetzal, (See *Pharomachrus*.)
Quinidine, derivatives, effect on auricular flutter,5743
in digitalis poisoning,2302
effect on heart,5746
on thiobarbiturate action on heart,525
pharm.,13178
toxicity, sympathol as affecting,1825
Quinine in avian malaria,15183
bihydrochloride, in malaria, atabrin mussonate compared,4560
derivatives, effect on:
bladder,5747
heart fibrillation,5746
myotonia, goat,2312
effect on:
acetylcholine formation in tissues,14664
antibody titers with and without irradiation,13410
cholinesterase,14661
heart center,13073
intestine and uterus,14855
muscle,7684
myotonic,11231
reduction of oxidation-reduction indicators,16331
skeletal muscle, drugs affecting,11240
infusion, electrophoresis,510
iodine, in malaria splenomegaly therapy,2665
leucemoid reaction to,13254
in malaria control, Rome,5098
in malaria therapy,1558, 6144
in African natives vs. whites,8188
malarene vs.,2657
plasmochin and,1558
pharm.,13178
storage in *Plasmodium* spp., fluorescent-microscope study,11575
test for,1346
therapy, blackwater fever after,6727
use in iontophoresis of cornea,3550
Quinolium, cetyl-, permeability of branchial epithelium to,9082
Quinoline, 4-acetoacetyl-6-methoxy-, malaria therapy by derivatives,9930
acid imide, precipitation reactions with phenols,17370
decahydro-, tetrahydro-iso-, and -quinoline, fate in body, dog,16478
precipitation reactions with phenols,17370
Quinone compounds, vit. E potency, 12869
Quinoplasmin, effect on malaria,6144
Quiscalus quiscula aeneus, blood parasites,3257
- R**
- Rabbit. (See also *Lepus*.)
adrenal transplants, persistence of medullary tissue in,13305
anatomy, book,659
Angora, wool production, measurement,11515
antigenic action of duck egg-white on,905
aortic arteriosclerosis in,4088
appendix, relation of flask-shaped glands and lymph nodules in,9684
bile acid comp.,12891
bile ducts, induced proliferation,5907
blood-group relations,2594
blood lipids in,10888
blood pressure detn. apparatus for,7325
bone marrow inhibition induced by splenic vein ligation,2426
body temp. and metabolism in heat stroke,5532
cervical dorsal root fibers, intramedullary course,7961
control in Britain, methods,14433
- corpus luteum hormone in blood of pregnant,3618
cottontail, dog tapeworm in,15976
scarcity, in Wisconsin,5230
development of *Ligule* plerocercoids in,6739
diseases,6243
dist. and numbers, relation to floods,3495
ear chamber for observation of tissue,3601
ear position, nervous control,16739
egg, development of fertilized and artificially activated,17052
embryonic tissues, survival after exposure to low temps. and transplantation,5962
endemic typhus susceptibility,2632
exptl. *Dicrocoelium* infection in,14183
exptl. *Trypanosoma evansi* in,12259
eye, refraction during excitement, 16681
fibroma, virus transforming to that of myxoma negative,11549
Friedman ovulation test, climate as affecting,16659
galactogen tolerance,5543
germ cells, origin and development, 737
hearing pathway in,14702
heart valves, induction of blood vessels by mechanical damage,672
in hemochorialis group of placentas,9907
highway mortality,18105
hyperparathyroidism produced by diet,7535
hypoglossal nerve, origin,13298
iliac vein ligation, effect on femoral and tibial marrow,4319
immune specific M-agglutinins production, inheritance,15170
infectious myxoma, (See *Myxomatosis*.)
inheritance of brachydactyly and associated anomalies,4394
of dwarfism,16199
kidney, vascular supply, degenerating glomeruli and,13294
liver, abscess, *Aerobacter leporis* from,17448
cells, various substances as affecting, cytology,2448
lymphatic pathway from nose and pharynx,676
molars, development,5957
newborn, body temp. regulation in, 283
Hb in,9146
immunity, transfer via colostrum vs. placenta,9907
sexing,5230
papilloma, (See *Papilloma*.)
parturition, estrogenic hormone as affecting,9316
patency of uterotubal junction,9418
pituitary hormones, age and sex differences,9369
lactogenic content during growth,12959
seasonal variation in gonadotrophin content,14624
precipitin formation in, hereditary relations,9863
rabies, (See *Rabies*.)
reaction of fetal cerebrum to drugs,7656
rectal temp. of normal,7410
as reservoir for liver fluke,12261
resistance, to echinococcus infection,1550
to larval cestodes,17289
respiratory system, anatomy,4315
reticulo-endothelial system,4316
sensitization after heteroplastic grafts of thyroid tissue into ant. chamber of eye,9671
sensitized, blood marrow and blood picture in,2427
sera, group-specific agglutinins for human cells in,11568
small intestine, wandering lymphocytes in, hist.,15040
sperm transportation in ♀♀,7592
spleen wt. relation to heart and body wt., exercise and,15008
stomach worms as affecting,10548
"sweet clover disease", alfalfa protective action,17395
syphilis, spontaneous spirochaete-induced,6249
teeth structure, hyperpyrexia as affecting,13806
temp. of body and organs,3664
thyroid, formation of new follicles in living grafts,7972
nuclear cytoplasmatic and colloid pH,16986
- tongue and spinal accessory muscles, sensory innervation,7962
tularemia, (See *Pasteurella tularensis*.)
tumors, Brown-Pearce, distr. of metastases,5802, 5814
carcinoma of thymus, metastases,16874
embryonic nephroma,4191
mammary gland, inheritance,13203
vasomotor reflexes in young,7704
Rabies, allergy in antirabic treatment, causes and prevention,11536
in animals, monograph,15257
antiserum for,13438
bats transmitting to cattle, horses and man,9566
in Brazil,17288
chemotherapy by sulfanilamide and related drugs,9921
control program, Illinois,15337
diagnosis, and immunization, human statistics,13577
in man and animals,13595
in domestic vs. wild animals,11750
epidemic,9956
epidemiology and control in man vs. dog,11723
and prophylaxis in tropics and subtropics,11674
immunization, by avirulent purified vaccines,11517
by formalized culture virus,4466
review,13391
intracerebral passage effects on fixed vs. street virus,13567
paralysis from, man,13575
prophylactic measures,15306
review,13391
pseudo-, (See *Pseudorabies*.)
survey, in Indiana,15243
vaccines, mouse test for potency, 13511
phenolized vs. dried cords,17198
virus, culture,4588
development (?) in dog tick,9952
diluent as affecting,10439
distr. in infected body,4588
fixed, development in rabbits, Na sulfanilyl sulfanilate as affecting,12643
incubation duration and mortality, climate and season as affecting, rabbit,8288
preservative fluid for,2623
morphological study,4588
strain from vampire bat,6170
tissue culture,950, 2630, 15245
Raccoon(s). (See also *Procyon lotor*.)
Ascaris columnaris in,17906
bile comp.,9266
breeding behavior, light and diet as affecting,5664
digestive tract, anat. and hist.,4354
Race(s). (See also *Plant diseases, resistance*.)
differences, in crop-sac response to prolactin, pigeon,7534
in diabetic trait in rats,3807
in position of external auditory meatus in cattle and dogs,4314
urinary calculi in an inbred strain of mice,7536
of man, (See *Man, races*.)
physiological, of mosquitoes,8660
Racemization. (See *Optical activity*.)
Rachitis. (See *Rickets*.)
RADIASPI (Hom.) (p.1875⁴),10605
Radiation(s). (See also *Irradiation*; *Heat*;
Light; spectral portions of light, e.g., *Infra-red*, *Ultraviolet*; *Radioactivity*; radioactive substances, e.g., *Radium*, *Thorium*; and such specific radiations as *Alpha particles*, *Beta rays*, *Cathode rays*, *Gamma rays*, *Mitogenic rays*, *X-rays*. For electric short waves see *Electric field, high frequency oscillating*.)
actinic vs. non-actinic in etiology of cancer,13209
biological effects, review,7244
cosmic, effect on mutation rate, *Drosophila*,7144
effect on histamine liberation in lung,9103
natural and human biology,8980
and plant cytogenetics, review,8933
quantities, measurement,5473
reduction of SH groups by,9104
solar, fluctuations with atmospheric conditions,16246
subterranean lightning incidence and,14389
of sun and sky, apparatus for measuring,16243
wave length, effect on glycolysis,5470

- Radicle. (See Embryo (plant); Embryogeny; Root; Seed; Seedling.)
- Radio waves. (See Electric field, high frequency oscillating.)
- Radioactive substances. (See also Radium; Thorium; etc.)
- carcinogenesis and,7824
- deposition, mice,4189
- effect on thyroid, rat,10859
- isotopes, absorption rate,3546
- Radioactivity. (See also Beta rays; Gamma rays; and particular radioactive substances, e.g., Radium, Thorium.)
- artificial, application,1906
- of drinking and soil water, effect on goiter,14974
- natural and artificial, physiological action,4116
- of potassium, physiological action and,3545
- Radiography. (See X-ray, photography.)
- Radiolaria (Protozoa), p.1868²
- Radioscopy. (See X-rays.)
- Radiosensitivity of cells, metabolism and,12780
- Radiosterol. (See Ergosterol, irradiated.)
- Radiotherapy. (See Irradiation and specific types of radiations.)
- Radiothermy. (See Electric field, high frequency oscillating.)
- Radish. (See also Raphanus sativus.)
- growth inhibitor in extract,15716
- mosaic (virus), descr.,6659
- modulation, in seedlings, heteroauxin as affecting,12067
- white rust, pathogenicity, light as affecting,17822
- Radium. (See also Alpha particles; Beta rays; Gamma rays; Radioactive substances.)
- in blood and tissues after injection,3572
- effect on:
- cytoplasm of eggs, pholas,9107
- developing bones,5471
- fibroblasts and sarcoma in tissue culture,3574
- lung diseases, in miners,7848
- sea urchin eggs and sperm,12699
- skin carcinoma,4195
- emanations. (See Radon.)
- poisoning, deposits and distr. in body, and tolerance dose,14474
- in trichinosis therapy,8713
- Radix ononidis, diuretic action, 4168, 16783
- Radon, disintegration products deposited in tissues,3573
- effect on leucocyte count,3574
- Ragl. (See Eleusine coracana.)
- Ragondin, exptl. echinococcosis in, 12248
- Ragweed. (See also Ambrosia.)
- antigens, vol. vs. absorption rate, 9828
- cutaneous sensitization, gross and microscopic changes,17141
- pollen, antibodies, production in animals, cross reactions with, 11525
- skin-sensitizing, passive transfer to man,11566
- antigenic relationships, by Dale test,15142
- chemistry and immunology of proteins,2542
- extracts, activation of ultrafiltrates by colloids,6074
- allergenic activity of protein vs. nonprotein fractions, 13493
- inactivation by adsorption,15128
- protein, electrophoresis into skin,10833
- skin-reactive substance as,15128
- oral adm.,17121
- pollinosis, oral + subcutaneous therapy,15148
- Raigan, as anthelmintic for teniasis,9924
- Raillietina (p.1870⁴), n. spp.,12300A
- incidence, Ecuador,15987, 15988, 15992
- cesticillus, effect on growth, chickens,14192
- as influenced by brilliant green therapy,17898
- crassula, from pigeon and dove, redescr.,17279
- echinobothrida, ant as interm. host,15988
- tetragona, as influenced by brilliant green therapy,14160
- Rainfall. (See also Snow.)
- conservation, bibliography,7084
- correlation, with latitude, longitude and altitude, Alberta,108
- with leaf anatomy,4803
- with soil and water losses,14838
- effect on:
- apple crop,8985
- brooding birds,18074
- carbohydrate in *Canna* rhizomes, 2930
- coffee production,16234
- cotton yield,10752
- forage crops, Scotland,17590
- soil erosion,15550
- soil organic matter,13858
- soil structure,13857
- wheat yields, statistics,2927
- intensity, in Indiana,8990
- and mean temp. range of Nuevo Leon, Mexico,12593
- observations, average separation of stations and,16245
- rainwater, chemical content, Oklahoma,2938
- records for Union of South Africa,16239
- relation to annual variations in soil acidity of woodlands,16251
- to evaporation, Ohio,8992
- to pink bollworm damage to cotton, India,13184
- runoff, effect on fauna of marine harbor, California,12628
- Rain forest. (See Forest.)
- Raja (p.1879¹) *clavata*, proteins,7676
- eglanteria*, eggs, descr.,6951
- Rajidae (Elasmobranchii), p.1879¹
- Rallidae (Aves), p.1881²
- Rallus (p.1881²), n. spp.,7015
- Ramalina (p.1862³), tax.,15473
- Ramie. (See Boehmeria nivea.)
- Ramon anatoxin. (See Anatoxin.)
- Ramon flocculation test, in standardization of staphylococci toxin and antitoxin,9892
- tetanus antitoxin standardization by,871
- Rana (p.1880²). (See also Amphibia; Frog.)
- coccygeal lymph hearts, innervation,15014
- cutaneous glands, structural changes in relation to secretory activity,11420
- embryology, guide,9765
- factors initiating morphogenesis, 736
- lymphatics and associated bloodvessels, development,9686
- muscle, number of fibers per sq. mm.,666
- phagocytes originating in ovary during starvation,4370
- vertebral column, development, 5880
- adspersa*, *Agumascaris* from,14216
- agilis*, in Lorraine,3397
- arvalis-R. fusca* hybrids, gonads and chromosomes,58
- catesbiana*, gonads, mammalian hormones as affecting,11412
- hermaphroditism,3398
- sex differences in,6977
- Tetrapapillatremia concavocarpa* from,1597
- clamitans*, filaria, development in mosquitoes,10483
- gonads, sex hormones as affecting,16982
- tadpoles, amphistome in,12252
- esculenta*, color changes in response to urea and MgSO₄,13051
- introduction and dist. in East Kent,12578
- sex differentiation, sex hormones as affecting,5900
- fusca*, metabolism of egg during course of development,9758
- palustris*, *Haptophrya* in intestine, 10527
- piptens*, brain, vascularity,660
- cleavage, colchicine as affecting, 9771
- density changes during development,4385
- development, temp. as affecting, 747
- epidermis, mitotic rate in normal and colchicine treated tadpoles,2472
- filaria, interm. hosts,6721
- hibernating testis, ant. pituitary hormone as affecting,4343
- lung musculature, structure,9705
- new cestode from,6793
- pars anterior, effect on thyroid, guinea pig,374
- pars tuberalis, relation to melanophore response,3938
- pigmentation changes after centrifugation of embryo,742
- pituitary gland, vascular connections,9685
- Rana* (continued)
- piptens* (continued)
- thyroid gland, morph. in metamorphosis,5896
- tolerance to cardiac glucosides, 514
- sphenocephala*, filaria of, interm. hosts,6721
- new nematode parasites,17959
- sylvatica*, limb development after unilateral eye extirpation,13340
- temporaria*, histolysis of operculum during forelimb perforation formation,15077
- mandibular arch, changes during metamorphosis,664
- melanism in,10631
- Ranales (Dicotyledones), p.1865²
- Rancidity, prevention by esters,11769
- Randallia ornata*, claw abductors, double motor innervation,5702
- Randia* (p.1867³), n. spp.,2858, 6437
- Range. (See also Forage plants; Grazing; Pastures.)
- cattle, feeding supplements for,15101
- rate of stocking, effect on carcass and body wt.,15099
- density and yield of black grama and tobosa grass, clipping as affecting,12583
- distr. of *Sporobolus* in Nebraska,12602
- ecology,10791
- grass, carotene in, monthly variation,9810
- plant, of California foothills, seasonal changes in comp.,13809
- study, sampling method,17571
- vegetation types, furrowing as affecting,10791
- Rangelia vitalis*, in dogs, Brazil,14182
- Rangifer caribou*, extirpation in Maine,3540
- Ranidae (Amphibia), p.1880²
- Ranina* (p.1874³) *soembaensis* (E),12335
- Raninidae (Crustacea), p.1874³
- Ranunculaceae (Dicotyledones), p.1865²
- Ranunculus* (p.1865³), n. spp.,17517
- chromosomes, form, number and size,5286
- growth forms and rest periods, 3514
- asiaticus*, *Pythium*, rootrot of,17761
- auricomus*, variability in,3514
- ficaria*, sexual reproduction,6449
- Raphanus* (p.1865³), colchicine and polyploidy,1698
- raphanistrum*, in Germany,2869A
- sativus*. (See also Radish.)
- self-sterility in,10733
- Rasberry(ies). (See also Rubus.)
- culture and variety trials, Kansas,15591
- fruit buds, temp.,6512
- insect pests, *Carposina*, parasite of, New Zealand,10458
- control,8638
- mosaic, control by seed-constant vars.,17840
- genetics of resistance,15860
- red, breeding for southern adaptation,12522
- resistant vars. to mosaic vector, 8637
- root distr. in soil, tillage as affecting,1884
- translocation of carbohydrates in, 10319
- Rat. (See also specific genera, e.g., *Mus*, *Rattus*.)
- adrenal gland, enucleated, regeneration,9693
- adrenalectomized, litter survival after treatment with cortico-adrenal substitutes,13049
- age at sexual maturity, genes and,10734
- aging and retarded growth, chem. and path. changes in, 14554, 14555
- anaphylactic-shock and shock-like resistance,9896
- anemia. (See also *Bartonella murr.*)
- immunity to,2515
- blood pressure, detn.,7320
- of systolic,9535
- of British Isles, population dynamics, habits,16112
- as *Brucella abortus* hosts,6232
- in brucellosis spread, inoculation studies,2713
- cartilaginous foci in aortic ring,9520
- chronic ulcerative cecitis in,6238
- control, in sugar cane fields,18092
- cozymase and nicotinic acid amide content,13266
- Cysticercus crassicolis*-infected, absorbable properties in sera,4543
- dental caries susceptibility,15037
- diabetic trait in strain,3807
- diets fed by stomach tube after hypophysectomy,14520

- Rat (*continued*)
 echinostomiasis in, Java,.....17911
 egg, development in vitro,.....8048
 exptl. amebiasis, with cysts from man,.....8712
 extermination, by rat-virus preps., statistics,.....8282
 extraembryonic coelom and fetal membranes, origin,.....5950
 fetuses, treatment of mother with pregnancy urine, as affecting,.....154
 water and dry substance in,.....2044
 food preferences and demands,.....3999
 germ cells, development,.....17038
 glycogen in brown and white fat,.....5540
 gonad, changes during estrus cycle,.....7975
 development, light as affecting,.....12960
 and gonadotrophic hormone secretion, testosterone as affecting,.....7964
 hypertrophy with yeast extract,.....7966
 gray Norway, life processes during 14 yrs., captivity,.....3988
 growth and development under thymocrescin treatment,.....12643
 growth and sexual function, thymus as affecting,.....16597
 heart and spleen, preservation of viable trypanosomes in,.....12255
 hemolymph nodes, function, nephrectomy and adrenalectomy as affecting,.....16964
 hormones, time relations in cyclic release,.....12643
 house, *Salmonella* incidence in,.....13643
 hydronephrosis, with hypertension, kidney pressor substance and,.....4100
 hyperthyroid, testis function in, gonadotrophic and σ hormones as affecting,.....7971
 impotent σ , testosterone as affecting,.....396
 infested with plague carrying tick in coal mine,.....8800
 inheritance of emotionality,.....1768
 iodine in thyroids,.....11059
 kangaroo, visceral anatomy,.....4353
 kidney, mitotic activity,.....55, 693
 vascular supply, degenerating glomeruli and,.....13294
 labyrinthitis, control,.....11303
 lactation, diet as affecting,.....7400
 leprosy, bacilli, physical and chemical properties,.....15258
 u.v. irradiation as affecting,.....17380
 in bandicoot,.....17372
 human form compared,.....6195
 immunological reactions,.....9835
 as *Leptospira interrogans* reservoirs,.....15238
 leptospirosis, incidence and sero-relations,.....1001
 liver, acidophil lining of bile capillaries,.....7981
 cells, excretion of fluorescent dyes and,.....4851
 extract, effect on blood picture of mother and newborn,.....10891
 sinusoids, cells lining, origin,.....15061
 localization of *Giardia* in intestine,.....1553
 long bones, regeneration of cartilage plates in,.....14998
 wt. and composition, bilateral variation in,.....9708
 masculinization of $\sigma\sigma$ by gonadotrophic extracts,.....12934
 migration from flooded areas,.....5240
 M.L.D. of chlorides of Na, K, Ca, and Mg,.....9843
 molars, development,.....5957
 nematode, in captive monkeys,.....15955
 nervous system, cortical and subcortical localization patterns, interrelationship,.....16977
 neurohypophysis, parenchymatous glandular cells, structure and function,.....9692
 newborn, basophilic aggregations in,.....10916
 blood picture in,.....3621
 erythrocytes, gastric juice adm. to mother as affecting,.....9619
 12643
 salivary gland removal, effects,.....3972
 nicotinic acid requirement,.....7475
Nippostrongylus infection, cellular vs. humoral reactions,.....11572
 oral assay method for cortical hormone,.....5610
 organ wts., ovariectomy as affecting,.....13302
 pantothenic acid requirement,.....16527
- Rat (*continued*)
 parotid gland, hist. after pilocarpine injection,.....4352
 pituitary, ablation, effect on adrenal, thyroid and testis,.....2439
 changes of $\sigma\sigma$ on diets without vit. E,.....15021
 gonadotrophic content during life cycle,.....5633
 histopath. after inj. of follicular hormone,.....16990
 placental sign in,.....13050
 as plague-carriers, serodiagnosis,.....13441
 as plague reservoirs, survey in Fukien,.....11718, 13660
 pleuropneumonia-like organisms from,.....15412
 pneumonia in,.....8242
 polyarthritides,.....11631
 etiology,.....15360
 immunity, after infection vs. hyperimmunization,.....13406
 infectious,.....9944
 therapy by gold compounds,.....11532
 preferential responses of σ to food and to receptive $\sigma\sigma$,.....2191
 pyogenic filterable agent in sarcoma 39,.....613
 reasoning in maze-bright and maze-dull animals,.....3991
 as reservoirs of Weil's disease,.....8302
 reticulo-endothelial system,.....4316
 dyes and,.....11384
 reverse mutation to agouti,.....1767
Rickettsia of murine typhus isolated from, Peking,.....10030
 rôle in trichinosis,.....14195
 sarcoma, carcinogens as affecting,.....585
 seminal vesicles, seasonal variations in,.....7974
 senile, testosterone as affecting vigor,.....16613
 sera, effect on human erythrocytes,.....16866
 sewer, *Leptospira interrogans* incidence in,.....6200
 sex behavior, technic for study,.....2172
 sex differences in blood histamine, 256
 skeletal muscle changes in young of vit. E-low mothers,.....13313
 skin, grafts between haired and hairless, fate,.....9699
 mitotic rate, colchicine as affecting,.....16994
 small intestine, wandering lymphocytes in, hist.,.....15040
Spirochaeta interrogans incidence in,.....8139
 standardization for bioassay of vit. E,.....344
 Stephanski's bacillus infection tests in,.....4654
 strain difference in estrus,.....16680
 in fetal resorption,.....16657
 striated muscle, glycogen localization in,.....4361
Strongyloides reproduction in, seasonal variation,.....15959
 tapeworm infections, premunition and,.....10485
 teeth, enamel structure,.....16995
 testis, and accessory sex organs, prolapse as affecting,.....2441
 hormone secretion under conditions of vasectomy and isolation,.....15023
 thymus, castration as affecting,.....5614
 reticulo-endothelial system and,.....11383
 thyroid, nuclear, cytoplasmic and colloid pH,.....16986
 tissues, acetylcholine formation in,.....14664
 trichinelliasis and,.....6736
 trichinosis in, alcohol as affecting,.....6744
 eosinophilia and blood count in, 1568
 Fukien,.....17917
 heat as affecting,.....10506
Trypanosoma cruzi in, seasonal variation,.....10497
Trypanosoma evansi in,.....12259
Trypanosoma rhodesiense in, pathogenicity,.....6724
 trypanosomiasis, immunity-age relations,.....4544, 4545, 4546
 immunization, age as affecting,.....9908, 9910
 resistance, transmission to young and factors affecting,.....9909
 serum K level in,.....5097
 tubercle bacillus (bovine) sensitization, antibody formation and lesions in,.....9852
 tumors, reimplanted, effects,.....11282
- Rat (*continued*)
 typhus *Rickettsia* and *Proteus* from, culture, inoculation and immunity tests,.....8190
 uterine tissue repair, hormonal factor in,.....9696
 visual cortex, functioning of small remnants,.....4329
 vit. A deficiency, nerve fibers in epithelium in,.....11398
 vit. B, lack, effect on ant. pituitary and thyroid glands,.....7967
 in tissues,.....5565
 vit. K requirement,.....7498
 water retention, pituitrin as affecting,.....14610
 wild, *Capillaria* ova in liver lesions, Rome,.....1572
 Rat-bite fever. (See also *Borrelia muris*.) case reports,.....9969
 Rat fleas. (See under *Fleas*.)
 Ratin. (See also *Salmonella enteritidis*.) bacterial types in, fermentation reactions,.....8282
 statistics on rodent extermination by,.....8282
 Ration(s). (See *Diets; Feeds; Foods*.)
 Rattlesnake. (See also *Crotalus*.) antivenins, polyvalent vs. monovalent,.....17142, 17143
 attacked by deer,.....5230
 fang structure and operation,.....15054
 as food of badger,.....5240
 killing quail,.....5207
 venoms, polyvalent antigens, effects of comp.,.....15138
 spreading factor and effect on action,.....2529
Rattus (p.1883). (See also *Mus; Rat*.)
norvegicus, gene for degeneration of retina and cataract,.....8945
 genetics and physiology of lethal anemia,.....12557
 linkage relations of new lethal gene,.....14370
 nutritional and genetic factors influencing, bent nose,.....1771
 second mutation to curly,.....12551
rattus, population study,.....12575
brevicaudatus, echinostomiasis in, Java,.....17911
Rauwenhoffia (p.1865*), n. comb.,.....13755
Rauwolfia (p.1867*), n. sp.,.....2882
Ravenelia (p.1862*), n. spp.,.....17498
 Ray(s). (See *Radiations*.)
 Ray(s). (See also *Elasmobranchii; Raja; Batoidae*.) and other genera of Torpedo,.....3381
 in fresh water,.....11186
 Raynaud's disease, papaverine as affecting,.....11186
Razoumofskyia (p.1865*), n. syn.,.....1158
 Reading, visual factors in,.....9476
 Reagents. (See also *Antibody*.) atopic, botanical classification of foods and,.....13513
 placental permeability to, monkey,.....11095
 in sera, preservation by lyophilization,.....6108
 Reasoning. (See under *Behavior*.)
 Reazurin test, in milk sanitary analysis,.....11779, 11780
 Recapitulation, theory, critique,.....3439
 3443
 Receptors, of bacterial strains vs. sub-strains,.....850
 Reconstitution. (See *Regeneration*.)
 Recording apparatus,.....12643
 Rectidon, effect on vasomotor reflexes, toxicity, rabbit,.....16766, 16767
 Rectum. (See *Intestine*.)
 Recurrent fever. (See *Relapsing fever*.)
Recurvirostra avosetta, nesting in Belgium,.....16083
 Red Cross, history, book,.....12476
 Red spider. (See under genera, e.g., *Tetranychus*; and under *Mites*.)
 Red water fever. (See *Piroplasmiasis*.)
 Reddish cup technic, for antiseptic evaluation, modification,.....4649
 Reducing agents, disinfectant action on molds,.....17397
 in potatoes, storage as affecting,.....12115
 Reductinic acid, absorption spectrum,.....2069
 Reduction. (See also *Oxidation-reduction*.) of ascorbic acid,.....3098
 of nitrates by bacteria, enzymes involved,.....15425
 in plants,.....8085
 test, for milk sanitary analysis,.....6289

SUBJECT INDEX

Reduviidae-Reptilia

- Reduviidae (Hemiptera), p.1875²
in transmission of trypanosomiasis,14165
- Redwood. (See also *Sequoia*.)15517
- phloem,15517
- Reflex(es), action, spinal cord and, review,7244
- autotomy, rôle of acetylcholine in,13005
- Petrolisthes*,13005
- binocular, and treatment of strabismus,11133
- book,11133
- cardio-inhibitory and vaso-depressor, from nose and throat,12643
- cardiovascular. (See *Vasomotor system, reflexes*.)
- carotid sinus, drugs as affecting, 2296
- clapping, seasonal variation, in frog,5676
- conditioned, accessory movements and,4054
- after cortical extirpation, dog,2195
- curare as affecting, cat,7618
- exercise and,3748
- of eyelid, altitude as affecting, 16670
- differential characteristics,7623
- random alteration of reinforcement as affecting,14695
- in rat,2177
- flexion, conditioned respiration and, dog,16676
- in frog heart, fish and spinal frog,11121
- gastric secretion effects on acoustic stimuli, duck,7526
- high order, elaboration with food as constant incentive,12643
- level, frequency of response as affecting,7610
- in *Lumbricalus*,14696
- olfactory, *Nemeritis*,5681
- Pavlov's theory,3996
- pre-, sensory, dog,16667
- reactions to position and angular acceleration,4031
- review,7244
- salivary, man,12643
- pig,12643
- temporal gradient of reinforcement,14691
- vs. unconditioned,12643
- conditioning, excitation and inhibition simultaneous transfer,5683
- in goat,12643
- irradiation of extinction,3998
- cremasteric, absence due to muscle atrophy,14748
- defensive. (See *Defense*.)
- development, infant,7616
- ear scratching, morphine as affecting, cat,14865
- in earthworms, study,14692
- in estrus cycle,14699
- eye movements. (See *Nystagmus*.)
- flexor, latent inhibition, spinal frog,5701
- habituation, learning and,7606
- as influenced by anesthetics,16806
- by prolonged afferent nerve stim.,459
- labyrinthine. (See *Vestibular apparatus, reflexes*.)
- local, factors conditioning in embryos,11443
- locomotor, in earthworm,4044
- in fish,2225
- nerve impulse frequency and,4009
- neck, effect on perceptivity of tension in arm and finger muscles, 16683
- nictitating membrane, spinal pathways for, cat,16684
- patellar, as measure of muscular tension,7678
- stim. of related cortical foci as affecting,12643
- threshold, exercise as affecting, 12643
- voluntary leg activity as affecting,11118
- postural. (See also *Posture*.)
- in man,4048
- proprioceptive and exteroceptive stance, mechanism,4018
- pupillary. (See under *Eye, pupil*.)
- reinforcement, frequency, effect on level of conditioning,7610
- respiratory, drugs as affecting,14817
- response to altitude,2244
- retraction, in *Spirographis*,462
- sensory generalization with voluntary reactions,5679
- skin and nose, rôle in heat regulation,16317
- spinal, as influenced by:
anesthetics vs. spinal transection,2218
- Reflex (continued)
spinal (continued)
asphyxia,2245, 5700
- eserine,16699
- in nicotine poisoning,12643
- after spinal transection, monkey, 452
- in spinal monkey,452
- startle, book,7621
- stomach, rectal distention as affecting,2108
- vagus-post-pituitary, exhaustion and recuperation,11077
- non-eserine vagus response in vertebrates,11082
- pathways,7658
- vasomotor. (See under *Vasomotor system*.)
- vestibular. (See *Vestibular apparatus, reflexes*.)
- viscero-pannicular, sensory somatic nerve stim. and,7651
- Reforestation. (See also *Afforestation; Forests; Forestry*.)
- in Italy,17645
- in Sicily,15629
- use of lime in,13982
- Refractory period. (See under *Heart; Muscle; Nerve; Reflexes; etc.*)
- Refrigeration. (See also under *Food, preservation; Storage*.)
- of dressed poultry, precooling for,13670
- effect on larvae and pupae of parasitic Hymenoptera,1521
- of fish,10032
- of food, microorganisms and enzymes and,10041
- of legs of pork for ham manufacture,10034
- problems in,13377
- of smoke-cured fish,10033
- Refuse. (See *Garbage*.)
- Regeneration. (See also *Development; Growth; Morphogenesis; Propagation; Transplantation*.)
- ant., in the earthworm, rôle of nerve cord in,5968
- of autografts of thyroid tissue in partially and completely thyroidectomized rats,9694
- capacity, in *Paramecium*, racial variation,11468
- of cartilage plates in long bones, rats,14998
- in *Diphyllobothrium*,8689
- in *Enchytraeus* (Annelid), exptl. study,6809
- of end arteries in opossum brain, 4323
- of enucleated adrenal gland,9693
- in *Euplanaria*, production of multiple heads in,13348
- of gonad tubules in sea cucumber, 5969
- of *Hydra* from ectodermal and endodermal layers cultivated separately,5971
- metabolic activity of organism and,11465
- of muscular elements in annelids, 11469
- of nerves, in *Triturus*, Axolotl, 657, 658
- plant, of accessory buds, temp. and moisture as affecting, mulberry,6590
- of forest. (See *Forest, regeneration*.)
- of roots, from alfalfa cotyledons,15792
- plant and animal, review,12832
- of pleopods in *Potamobius*,9674
- of polychaetes,11466
- post anal, in trout larvae,9672
- repeated, of head and tail regions of planarians,17064
- rôle of nervous system in, insects, 434
- of sartorius muscle in frog,14997
- of somatic muscles in fish,11376
- of suprarenal tissue, rôle of capsule in,4308
- of tail, gut and anus in urodeles,4391
- of tail, in syllid Polychaetes,2183
- of tails and eye grafts, during complete starvation, *Amblystoma*,11374
- of testis, bearing on germ cell theory, fowl,656
- of thoracic legs in crustaceans,11470
- in *Tubularia crocea* after removal of perisac,5973
- in *Uroleptus mobilis* after injury by electric currents,3995
- after wounding in carp,9675
- Regnellidium* (p.1863²), spore production,10164
- Regulidae (Aves), p.1882²
- REHDEROPHOENIX (Dicot.)(p.1864²)10121
- Reindeer. (See *Rangifer*.)
- Reithrodontomys (p.1882⁴), n. subsp., 18096
- h. humulis*, life history,14312
- montanus albescens*, development of young,8866
- Rejuvenation. (See *Gonads; Hormones; Transplantation*.)
- Relapsing fever. (See also *Borrelia; Spirochaetes, of relapsing fever*.)
- animal hibernation as affecting,853
- clinical and statistical study,8285
- complement-fixing substance, transmission to and persistence in offspring,4532
- effect on blood picture,825
- epidemiology, in Africa,15314
- therapeutic, inoculation sites compared,4630
- transmission, mechanism and routes, in Chinese form,4581
- by ticks, California,4669, 8278
- by tropical rat mite,17376
- West African, immunity without residual infection,13414
- Relict(s), *Acer saccharum* as, Oklahoma,3506
- fauna, of East Alps,7182
- in flora of Ohio,12599
- spp. *Callitris* as, Spain,7219
- Remusatia* (p.1864⁴) vivipara, bulbul formation,4768
- Renal. (See *Kidney*.)
- Renanthera storiei*, culture,8509
- Rennet, micro-flora of liquid and powdered,11775
- Repellent(s) (insect). (See also *Insecticides*; and especially under specific repellents.)
- for *Aedes* mosquitoes,10437
- for flatheaded apple tree borer, effect on trees and parasites,10391
- for *Sezava* on coconut palms,5017
- tetramethylthiuram disulfide as,12234
- Re-population. (See *Colonization*.)
- Reproduction (animal). (See also *Fertility; Parthenogenesis; Population; Regeneration; Sterility; Vitamins*.)
- and associated ecological factors, oyster,5407
- in birds, book,1643
- characteristic of living matter,1
- in *Chilomonas* cultures, substance controlling,5103
- efficiency, in dairy cattle,9819
- in howler and spider monkeys,9415
- importance in organisms,8406
- as influenced by:
brief hyperthyroidism, rat,7591
- cystine deficiency,9330
- diet, rat,16465
- estrogenic hormone, mouse,9307
- light, raccoon,5664
- low fat diet,16501
- lysine deficiency,9329
- previous vit. A depletion, rat,3714
- removal of neocortex, rat,14679
- Zn in diet, rat,270
- law of natural increase,9205
- in male bats,5671
- in man, ape, and monkey,11104
- matroclinal, in hybrid, *Mollisia formosa*,5346
- in *Paramecium*, change of mating type during,11105
- food exhaustion and staling products as affecting,5102
- and population growth, book,3486
- in rats during 14 yrs. in captivity, 9988
- rate. (See also *Birth rate*.)
- of *Plasmodium cathemerium*,10481
- riboflavin requirement for, poultry,17110
- rôle of hormones in,7069
- of terns,5413
- Reproduction (plant). (See also *Propagation; Seed formation*; also specific types and organs for.)
- of cereals, correlated with carotenoid content of leaves,8576
- hormones associated with,8571
- in *Melanospora*, sugars and plant hormones as affecting,15761
- nucellar embryony, and clonal characteristics, *Citrus*,1745, 1747
- in tomatoes, var. differences, relation to N demands,15614
- Reproductive system and organs. (See under *Genitalia*; and specific organs or parts, e.g., *Ovary, Penis, Testis, Uterus, Vagina*, etc.)
- Reptantia (Crustacea), p.1874²
- Reptilia, p.1880². (See also *Lizards; Snakes; Turtles*.)
- of Balkans, list,6976
- blood, physiol. properties,10942
- book,8875

- Rhizopoda (Protozoa), p.1868²
 pioplasms classified as,15980
 testaceous, in soil, E. Greenland, 14200
 from sphagnum pools, Lappland,10526
Rhizopogon (p.1862⁴) *luteolus*, descriptive notes,2812
Rhizopus (p.1861²). (See also *Molds*.)
 new species,6354
 effect on bacteriophages of *Rhizobium*,17427
 lactic acid production by sp.,4696
 metabolism compared to higher life forms,4696
 respiration in sp.,4696
nigricans, growth and fermentation, Zn as affecting,12061
oryzae, dextralactic acid production process using,11778
sinus, growth hormone produced by, use of *Colletotrichum* for testing,3067
Rhizosolenia distr. in relation to phosphate distr.,147
Rhodanates. (See *Thiocyanates*.)
Rhodanides. (See *Thiocyanates*.)
Rhodanum salts. (See *Thiocyanates*.)
Rhodium, syphilis therapy by salts,854
Rhodnius, in trypanosomiasis transmission,14165
Rhodobacillus palustris, hydrogenation by, mechanism,15426
 metabolism, hydrogenase rôle in,15421
Rhodobacteriaceae, metabolism, hydrogenase rôle,15421
Rhododendron, *Graphocephala coccinea* on, Great Britain,17881
 rooting of cuttings, auxins as affecting,1361
californicum, leaf extract, toxicity of,1328
Rhodomelaceae (Algae), p.1860⁴
Rhodopaxillus (p.1862⁴) *nimbatus*, identification,6339
Rhodophyceae (Algae), p.1860⁴
Rhodophyllus (p.1862⁴), spore shape as affecting affinities in,2813
Rhodotula sarniei, carotenoids of, chemistry,6605, 6610
Rhodotrema (p.1869⁴) *lethrinii*,6803
Rhodymenia (p.1860⁴), tax.,13726
Rhodymeniaceae (Algae), p.1860⁴
Rhodymeniales (Algae), p.1860⁴
Rhodeales (Dicotyledones), p.1865²
Rhombencephalon. (See specific parts, e.g., *cerebellum*, *medulla*, and *pons*, under *Brain*.)
Rhopalosiphum (p.1875⁴) *pseudobrassicae*, life hist.,3476
subterraneum, effect of temp. on,17874
Rhopogon (p.1861²), n. sp.,15453
RHOTELLA (Hom.) (p.1875²), n. sp.,3785
Rhubarb, O metabolism of leaves,14020
 forcing, culture, and vars.,1264
 history and culture, Great Britain, 1274
 morph., yields, and chem. comp., vars. compared,4873
Rhus (p.1866²), synonymy,11880
Pileolaria on,15497, 17475
succedanea, fustine from wood, chemistry,15692
toxicodendron. (See *Poison ivy*.)
 cutaneous sensitization to, gross and microscopic changes in, 17141
 dermatitis, serodiagnosis and serotherapy,6081
 sensitization to, mechanism,11544
 radicans, sensitivity to, allergic nature,15483
Rhynchosia (p.1877²) *holiana*, L. H. and control on pine,12206
Rhynchelasma (p.1871⁴) *limosella*, mitotic spindles of, as affected by centrifugation,1728
Rhynchites velatus, in California,17997
Rhynchitragus (p.1889⁴) *guentheri*, preorbital glands, anatomy,13285
Rhynchocalyx (p.1866²), position,10155
Rhynchodemidae (Platyhelminthes), p.1869⁴
Rhynchodemus (p.1869⁴) *terrestris*, in Wisconsin,10541
Rhynchopelta (p.1881²), food habits, 9064
Rhynchostoma (p.1866²), n. spp.,2328A
2370, 15505
Rhyparia (p.1876²) *obscuripennis*, on cocoa, New Guinea,14107
Rhyssa (p.1878²) *persuasoria*, parasitism on wood wasp, and life hist.,15928
Rhythm(s). (See also *Periodicity*.)
arrhythmia, in *Nitella*, relation to pacemakers,1393
 of division rate, *Paramecium*,10519
Rhytidoderus (p.1876²) *plicatus*, on Cruciferae roots, control,15934
RHYTIDODOIDES (Platyhelminth) (p.1870²),17945
Rhytiphora (p.1876²), n. sp.,10595
Rib(s). (See under *Bone*.)
Ribes (p.1865⁴). (See also *Currant*.)
 n. f.,1158
 aphids (*Kakimia*) infesting,18018
 in California,2876
 eradication of, for pine blister rust control, in U. S. A.,1462
 species infected by *Puccinia parkeri*,6357
 susceptibility of spp. and hort. vars. to *Cronartium ribicola*,15851
grossularia, dieback, due to *Eutypa lata*,15795
punctatum, susceptibility to *Cronartium ribicola*,15887
Ribose, detn.,296
Riccardia (p.1863²), n. combs.,4752
Rice, black-kernel disease,15890
 blast (*Piricularia oryzae*), cellulose decomposition and pathogenicity, 15850
 cadang disease, mineral deficiencies as factor,17800
 caseworm, Philippines,5039
 culture on alkaline soils, India,2956
 pH and nutrient soils, for,1851
 Malay States,11941
 pests, in U. S. A.,13816
 fertilizers for, P. I.,1210
 field, larval *Anopheles* population, 14167
 mosquitoes of, Ark.,12227
 N-fixation in, blue-green algae rôle,11785
 green manures for, Ceylon,13827
 hemicellulose extraction from hulls,11958
 irrigation, water resources in Ark.,4821
 kernel, injury by stinkbug, So. U. S.,12185
 milled, insect pests, control,5048
Ophiobolus mybabeanus on, effect of light on virulence,4991
 protein, value,14529
 relation to anemia of laborers on tea estates,11320
 seed-coat injuries, as factor in fungus infection,10350
 shade as affecting,8453
 spacing and method of planting as affecting,8462
 variety tests, Malay States,4815
 viability, red vs. white,15545
 water absorption from soil, temp. as affecting,6485
 weevil effect on unhusked vs. polished rice,3191
 wilting, moisture content of loam at ammonium sulphate as affecting,17589
Richeria (p.1866²), n. sp.,2885
† *Richthofenia* (p.1871²) *Cardinocranta*, young form of,12310
Richthofeniidae (Brachiopoda), p.1871²
Ricin, placental permeability to, guinea pig,12643
Ricinus (p.1866²). (See also *Castor bean plant*.)
 structure in relation to soil moisture,12587
communis, phloem development and flowering,10172
 wound-cambium formation, factors affecting,13934
Rickets. (See also *Cod liver oil*; *Ergosterol*; *Vitamin D*.)
 blood P and, Egyptian infants,2348
 bone development in, rat,16543
 bone structure in, infra red microphotographs,10877
 cereals and, chick.,8741
 cereal diets causing,10955
 diets causing,11023
 S₂ and effect on bones, rats,13272
 incidence and etiology, infants,7817
 metabolism in, vit. D and, rats,12862
 P in blood cells in,2085
 produced by beryllium, chickens,2402
 by oxalate in diet, rat,12860
 renal, treatment in children,2342
 therapy,11350
 tissue phosphatase activity in,3564
 vit. D, Ca and P inter-relationships in,16541
Rickettsia (p.1861²). (See also *Rocky Mountain spotted fever*.)
 agar-slant tissue culture,4603
Rickettsia (continued)
Bartonella, antigenic relations to,8199
 chapter in lab manual,14164
 diseases associated with, So. Africa,8203
 of exanthematic typhus diseases, Rocky Mountain spotted fever comparisons,13583
 -like virus, from *Dermacentor andersoni*, and tissue culture,4583
 mite-fever, tissue culture,6166
 murine-typhus, culture, inoculation and immunity tests,8190
 distr. in chick-embryo culture,18466
 isolation from house rats in Peiping,10030
 new louse-borne human febrile disease due to,12562, 13563
 "Q"-fever, factors in appearance in mice,8193
 laboratory infections by,8210
 in Q-fever and tick-transmitted Montana infection,17285
 Rocky Mountain spotted fever, vaccine prepared from tissue-cultured,15134
 tissue culture, in placental medium,13576
 of various,4582
 trachoma elementary bodies and,2628, 15218
 typhus, isolation on Zinsser agar-tissue media,8215
 vaccines, agar-slant tissue culture prep.,4603
 Weil-Felix reaction non-specific for,13586
 burneti, as "Q"-fever incitant,8195
 cants, Akron therapy,8218
 canine infection by,8218, 8219
 reservoirs,8219
 serological relation to *Proteus OX*,8218
 transmission by *Rhipicephalus sanguineus*,8219
pediculi, comparison to *R. prowazeki*,13563
 relation to new louse-borne *Rickettsia* disease of man,13562, 14563
prowazeki. (See also *Typhus*.)
 comparison to *R. pediculi*,13563
 from louse, properties,1003
rocha limae, inoculations to man and animals negative,15220
 lice infected by,15248
 trachoma not due to,13586
Rickettsiosis, effect on central nervous system,5866
 probable evolution,8899
 in trachoma etiology,8205
 vectors, S. Africa,8203
Righting. (See *Vestibular apparatus*.)
Rigidity. (See *Muscle, tonus*.)
post mortem. (See *Muscle, rigor mortis*.)
Rinderpest, goat-blood virus, viability at 37°-39° C. in incubators,13866
 immunization, with frozen desiccated goat spleen vaccine,15173
 preventive inoculations for, statistics,8166
 in Rhodesia,2717
 in sheep, immunization by goat-tissue virus,17236
 in Uganda,2718
 vaccine, goat-blood virus, trypan blue as affecting,13594
 lanoline as affecting,13593
Ringer's solution. (See *Salt solutions*, physiological.)
Ringing, of apple branches, effect on fruit set and size,13900
 of persimmons, effect on yield and drop of fruits,13886
Ringworm. (See *Dermatophytes*.)
Riodina (p.1862²), new species,6364
Riodinidae (Lepidoptera), p.1876⁴
Riodiniinae (Lepidoptera), p.1876⁴
Ripening. (See also *Fruit (edible)*.)
 of alfalfa, effect on distr. of N.,1183
 of apples, changes during,10222
 in storage, temp. as affecting,1252
 tests for Jonathan and Grimes Golden,11977A
 of bananas, respiration changes during,6608
 of *Blighia sapida*, changes during and effect on toxicity,6550
 of canning peas, changes in Ca/P ratio during,10218
 of citrus fruits, chemical changes during,15584
 of cotton, changes in carbohydrates during,1185

- of cream, factors in,.....10067
of flax seed, relation to drying capacity
of oil,.....10198
of fruits, ethylene produced during,.....10327
of grapes, standard index,.....12355
of oranges, effect on ascorbic acid con-
tent,.....18881
of peaches, pectin changes during,.....17628
of pears, effect on respiration and
emanation of volatiles,.....15758
factors affecting,.....16513
of potatoes, racial and clonal differ-
ences,.....16471
of *Sorbus* fruit, temp. as affecting, 1390
of tomatoes, changes in carotenoids
during,.....4878
effect on Cu content,.....13916
and fruit height,.....16520
respiration during, seasonal varia-
tions,.....12097
of tropical fruits, factors affecting,.....3009
- Risor** (p.1880²) *mirus*,.....10623
Rivanol, bacteria and protozoa demon-
strated by,.....11575
effect on blood coagulation,.....7358
Rivellia (p.1877⁴), n. sp.,.....14254
River(s). (See *Streams*.)
Rivista Forestale Italiana,.....8897
Rivularia (p.1860³) *bullata*, ecology, 16262
haematites, photosynthetic rate mea-
sured,.....1069
Rivulariaceae (Algae), p.1860³
Rivulus (p.1879³), new spp. Panama, 1637
Robillarda (p.1862²), tax.,.....15464
Robin(s). (See also *Planesticus*; *Turdus*.)
albino, offspring of pair,.....6994
behavior,.....18070
Robinia (p.1863³) *pseudoacacia*, brooming
disease (virus),.....3169
Cuscuta arvensis on seedlings of,
.....15816
depth of sowing in relation to germi-
nation,.....15662
inoculation with *Bacillus radicola*,
.....6528, 6529
phosphoric acid requirements, 12015
woodrot, comparative wt. loss by
different fungi,.....14043
- ROBYNSIELLA** (Dicot.) (p.1865²) *fasti-
giata*,.....1144
Roccus lineatus, host of *Stephanostomum
tenue*,.....15986
Rocky Mountain spotted fever. (See also
Rickettsia.)
exanthematic typhus diseases compared to,
.....13583
immunization, by tissue-cultured
rickettsial vaccine,.....15134
incidence and epidemiology in Canada,
.....11688, 11689
Rickettsia dermatocentrozoon absent in
tick vectors in Canada,.....11689
Rickettsia, tissue culture,.....4582
tick tests, Alaska,.....1564
tick transmission from dogs, incidence,
.....8298
virus, agar-slant tissue culture,.....4586
- Rodentia** (Mam.), p.1882². (See also
Mouse; *Rat*; *Vole*; and other
rodents.)
Ascaris infestation of lungs, exptl.
studies,.....14186
Bacillus rodens infecting,.....6243
blood used by ♀ *Aedes*,.....3202
as carriers of *Capillaria* ova to man,
.....8691
control by methyl bromide,.....6206
dentine, structure,.....13307
diseases,.....6243
dist. and numbers, floods and,.....3495
exptl. secondary echinococcosis in,
.....12248
extermination, by "rat-virus" preps.,
statistics,.....8282
laboratory, contr. to human biology,
.....8882
as *Ornithodoros parkeri* hosts,.....15296
parasites in Minnesota,.....5222
plague, incidence in U.S.A.,.....6214
infection by flea bites and feces, 8290
susceptibility, in Tunisia,.....999
as plague reservoirs, control,.....1004
Pliocene, of western N. America,.....7056
populations in forested area,.....3496
raptorial birds as affecting,.....6990
skeletal adaptations for digging, etc.,
.....16106
small, apparatus for snaring,.....1877
Rodenticide(s), methy bromide as,.....6206
"Rodentiosis", *Bacillus rodens* causing,
.....6243
- Roebuck**. (See also *Capreolus capreolus*.)
Brucella abortus infection in,.....6245
Roentgenography. (See *X-ray*, *photoog-
raphy*.)
Roentgen-rays. (See *X-rays*.)
Roeveriolus (p.1874⁴), n. sp.,.....6857
Rollandia, n. vars.,.....11897
Romalea micropter, ecology,.....9006
Rondeletia (p.1867²), n. sp.,.....6437
Rooms, bacterial content of air in,.....2681
Root(s). (See also *Root systems*.)
absorption, of ions, kinetics,.....12057
in various zones, *Vicia*,.....6559
of water, relation to guttation, 8578
anatomy, of cell walls,.....12510
comparative, and phylogeny,.....2905
in *Daucus*,.....10167
in *Lepidium*,.....4813
of Malayan trees,.....10278
of primordium, in apple,.....11928
of saprophyta *Allopora*,.....2853
aux in gradient in isolated, *Pisum*, 3066
of bindweed, food reserves in,.....10176
tillage as affecting,.....10178
competition, in relation to silviculture,
.....10278
to soil nitrogen,.....10257
content of soil of abandoned fields,
Nebraska,.....9019
excised, attracting plant-parasitic nema-
todes,.....17770
auxins produced in,.....4918
excretion of ions by, corn,.....13976
of field grasses, comparative study,
.....9012
formation and development. (See also
auxins, *calines*, etc., under *Hor-
mones*, plant; *Propagation*.)
in alfalfa, height and frequency of
cutting as affecting,.....17581
in asparagus, age as affecting, 13920
in *Coleus*, heteroauxin and polarity
as affecting,.....13985
in cuttings, as influenced by:
auxilin and hormodin, blueberry,
.....17684
auxins,.....1361
factors,.....11991
growth substances, application
methods compared, 15706
heteroauxin,.....15707
Nerium,.....15715
honey,.....15714
hormones, forage plants,.....10306
softwood,.....13988
substances and methods com-
pared,.....17683
plant hormones, *Arctostaphylos*,
.....13982
Sciadopitys,.....13983
sugar cane,.....1214
in gladiolus corms, auxins as affect-
ing,.....1362
in grasses, cutting frequency and
stubble length as affecting,
.....6490
in horseradish, plant hormones as
affecting,.....10303
as influenced by:
heteroauxin,.....3059, 3060, 15710
light and, corn,.....3065
humic compounds,.....17619
pH of heteroauxin,.....1357
indole-acetic acid,.....8570
synthetic substances,.....1355
vit. B₁,.....15710, 15734
in *Kalanchoe*, induced by dye,.....10364
in ornamentals, growth hormones
as affecting,.....3063
in pecan trees, indole-3-butyric acid
as affecting,.....13987
- fungi**. (See *Mycorrhiza*.)
geotropism in, mechanism,.....4921
growth, in alfalfa, clipping the tops as
affecting,.....17701
of desert plants, soil temp. and, 8989
and distribution, pimiento,.....17625
in sandy loam soils, peach,.....13873
dual effect of hormones,.....6576
of excised, growth factors affecting,
.....10316
nutrient solution for tomato,.....8574
temp. as affecting,.....4925
factor for, nicotine acid as,.....17706
hormones as inhibitors,.....17679
as influenced by:
hormones and vits.,.....12063
light, apple,.....17715
plant hormones,.....6575
potassium and light, *Lemna*,.....8575
in nutrient solns., vit. B₁ as affecting,
.....15732
in two containers, method,.....13903
in various soil layers, moisture and
depth as affecting,.....15552
- Root** (continued)
habits, of *Pinus palustris* and associated
spp.,.....3510
hairs, of field grasses, comparative
study,.....9012
growth, factors affecting,.....8565
infection by soil fungi, review,.....13730
knots. (For nematode root knots, see
Galls; *Nematoda*; and under gen-
era, e.g., *Heterodera*, *Tylenchus*.)
of *Macrozamia*, penetrating trunks of
Eucalyptus,.....17767
microorganisms on, significance,.....8349
nodal adventitious, in *Salix*,.....1166
nodules. (See also *Legume nodules*.)
mechanism of formation,.....17489
nitrogen excretion negative,.....2741
of *Phaseolus*, auxins found in,.....3169
nodule bacteria. (See *Legume nodule
bacteria*.)
parasitic Dicot. (*Pholisma*) on,.....4792
permeability, transpiration as affecting,
Vicia,.....13992
position, relation to tree growth, 3028
pressure. (See also *Sap*; *Transpiration*.)
diurnal fluctuations in,.....4939
proximal dominance, apples,.....15783
of raspberries, distr. in soil, tillage as
affecting,.....13884
ratio of surface to leaves, effect on
transpiration, lemon,.....15744
regeneration from cotyledons, alfalfa,
.....15792
respiration, nitrates and glucose as af-
fecting,.....10323
salt absorption as affecting,.....6602
rot, brown, of tobacco, etc., etiol., 15838
of cereals, etiol. and factors in infec-
tion,.....10348
research in Canada,.....17758
shape, in beets, factors affecting, 11992
N as affecting, sweet potatoes, 18791
staining, with Bismarck brown, 16116
starch in, relation to closeness of graz-
ing and survival, forage plants,
.....17597
sugar in extracts, ceric sulphate method
of detn.,.....15764
temp., effect on growth of cucumbers,
.....1263
tip, growth in nutrient solns., species
and size of tip as affecting,
.....15728
preparation of permanent squashed,
.....16152
smears, differential nucleolar stain
for,.....5284
use of Feulgen technic in study,
.....5265
tissue culture, nutrient soln. for,
tomato,.....17728
tropisms, hormones as affecting,.....6578
vit. B₁ synthesized by, pea,.....15735
- Root crops**. (See under *Crops*; and under
special crops, e.g., *Carrots*, *Tur-
nips*.)
Root-stocks. (See under *Propagation*.)
Root system(s). (See also *Roots*.)
of *Agave sisalana*,.....14393
of *Aletris*, relation to soil,.....1247
of apple trees, soils as affecting, 8504
of coffee, size and distr.,.....1289
of *Pentzia*,.....9030
of perennial and annual plants in
Judaea,.....10780
of *Pinus silvestris*,.....1312
of prairie vegetation, effect on soil
water relations and anchorage,
.....16265
of shade trees, fertilizer as affecting,
.....10219
of sweet corn vars., relation to growth
resistance,.....2937
of trees, extent and volume,.....9023
of wheat, development,.....8470
- Rorippa** (p.1865³), n. sp.,.....2865
Rosa (p.1865⁴). (See also *Rose(s)*.)
tax.,.....1158, 8442, 15486
origin of intercellular spaces in
meristems,.....2908
- Rosaceae** (Dicotyledones), p.1865⁴
Rosales (Dicotyledones), p.1865⁴
Rosanilin. (See also *Fuchsin*.)
Rose, black spot (*Diplocarpon rosae*), con-
trol,.....3153
canker (*Coniothyrium fuchellii*), control,
.....1470
diseases, control, in Arkansas,.....3158
cooperative expts. with gardeners,
.....3154
in France,.....2872A
greenhouse culture, with gravel and sub-
irrigation,.....11981

- Rose (continued)
 powdery mildew (*Sphaerotheca pannosa*),
 morph. differentiation from peach
 mildew, 6687
 rust (*Phragmidium* spp.), physiologic
 specialization, 1453
 Rose aphid. (See *Macrosiphum rosae*.)
 Roselle. (See *Hibiscus sabdariffa*.)
 Rossi, Giacomo, biography, 5276
Rostratula benghalensis, new tapeworm in,
 15992
Rostrhamus (p.1881²), food habits, 9064
Rotatoria, p.1871²
 Rotenone. (See also *Derris*.)
 analysis, 15931
 degueline isomer, as larvicide, in As-
 samese plants, 12223
 in *Derris*, 3050
 Assam, 10466
 Cebu, 17884
 and cube for pea aphid control,
 comparison, 17886
 high content, 12235
 as insecticide in dusts, value, 5080
 patents for, 1911-38, 5076
 in "pulga" plant, as insect repellent,
 India, 10476
 toxicity to fishes, 1525, 17390
 nitrophenols and, 16775
Rottboellia (p.1864³), n. sp., 8427
 Rottlerin, chemistry, 15685
 Roughage. (See *Feeds*.)
Rourea (p.1865⁴), n. sp., 2865
 Rowan berry, rowan tree. (See *Sorbus*.)
 Rubber. (See also *Euphorbia*; *Hevea*;
Latex.)
 budding, effect on yield, 13919
 clone tests, Sumatra, 8508
 culture, 4867
 fertilizers for, Ceylon, 2999
 formation in latex, tau-saghyz, 17710
 planting materials and clones, Ceylon,
 10225
 root diseases, Ceylon, 3166
 tapping systems compared, 4866
 young tau-saghyz, exploitation method,
 17635
 young budded trees, care, 10228
 Rubella, transmission (artificial) tests un-
 successful, 6199
 Rubiaceae (Dicotyledones), p.1867³
 Rubiales (Dicotyledones), p.1867³
 Rubiazol, intracysternal toxicity, 14835
 in malaria therapy, 11583
 pharm., 13168
 in tropical diseases, 17243
 Rubidium, chloride, radioactive isotope,
 effect on dog, 4116
 detn., in biological materials, 5482
 Rubrophen, in skin tuberculosis therapy,
 6156
Rubus (p.1865⁴). (See also *Blackberry*;
Raspberry; etc.)
 tax., 1158, 8444
 mosaic (virus), insect transmission,
 17780
 propagation, by leaf-bud cuttings,
 1224
sprengeli, mode of dissemination, 6413
Rucervus (p.1889⁴) *duvaucelli*, thyroïd and
 parathyroid glands, structure, his-
 tology, 16985
 Ruderals. (See *Weeds*.)
Rudaea (p.1867³), n. sp., 6437
Ruellia (p.1867³), n. sp., 6437
Eugaspidiolus (p.1875⁴), n. sp., 10605
 Rum, microbiological and biochemical
 processes in manufacture, 4687
 RUMATEA (Lep.) (p.1877²), *Zophodia*
bithida type, 8792
Rumex (p.1865⁴), n. sp., 8444
obtusifolius, *Helicobasidium* on, 13785
Rumfordia (p.1867³), n. sp., 13751
 Rumant(s). (See under *Mammalia*.)
 Running. (See under *Exercise*; *Locomo-*
tion.)
 Rupertidae (Protozoa), p.1868²
Rusa (p.1839⁴) *unicolor dejeani*, autecology,
 in Thailand, 5223
Ruscus (p.1865⁴) *aculeatus*, diuretic action,
 7558
hypoglossum, cladode morphogenesis,
 11924
Russula (p.1862⁴), n. spp., 6356, 8403
 cytology of lactiferous cells, of
 basidium, 44
serampelina, chem. tests, 8386
 Rust(s). (See also *Rugii*; under genera of
 Uredinales; and other hosts at-
 tacked, e.g., *Wheat*.)
 of *Antirrhinum*, vars. resistant to, 2982
 of Arctic regions, shortened life cycle,
 8396
 of banana, 17853, 17854
 control by fungicides, 1463
 cytomorphology, of *Uromyces hobsoni*,
 17760
 differential staining, in leaves, 15891
 host-parasite relations, 15862
 research in Germany, 1425
 spores, incidence in air, 6046
 stem, on spring wheat, effect on grass-
 hopper injury, 17877
 uredinia, development in *Blastospora*,
 1076
 Rut. (See *Estrus*.)
Ruta montana, volatile oils of, chemistry,
 10295
 Rutabaga(s). (See also *Turnips*.)
 brown heart, a B-deficiency disease,
 8617
 Rutaceae (Dicotyledones), p.1866³
 Ruysch, Frederik, biography, 7074
 Rye. (See also *Secale*.)
 bread, flavor, acidity and chem. comp.,
 bacteria in leaven as affecting,
 10061
 extraction of P from soil, vars. com-
 pared, 6475
 fields, injury due to June beetle, Fin-
 land, 12201
 self-sterility, causes, 16175
 sprouts in bread, dietary value, 16451
 use in Neubauer test, characters affect-
 ing value of test, 6479
 vernalization, rôle of auxin in, 6565
 wheat hybrid, chromosomes, 42
 inheritance of hairy in, 1754
 winter, development, climatic conditions
 as affecting, Germany, 10761
 roots and root hairs, 9012
Rynchospora (p.1864³), n. spp., 2828A
- S
- SABELLASTARTE (p.1871³) *arctica*, West
 Greenland waters, 1606
 Sabellidae (Annelida), p.1871³
 Sabiaceae (Dicotyledones), p.1866²
Sacamoeba (p.1868³) *pizana*, 3255
Saccharomyces (p.1861³), (See also *Yeasts*.)
 new spp. from wine must, Italy, 6340
cerevisiae, effect on Walker tumor
 no. 256, rats, 4196
 fermentation vs. respiration types,
 as influenced by media, 11759
 longevity, 6261
 physiological reactions with intra-
 vital stains, 16151
ellipsoideus, alcohol production by, 1025
 fermentation vs. respiration types,
 as influenced by media, 11759
 heat resistance, 15392
 Saccharomycetaceae (Fungi), p.1861³
Saccharomyces (p.1861³) *ludwigii*, genet-
 ics, spore formation, 17501
Saccharose. (See *Sucrose*.)
Saccharum officinarum. (See also *Sugar*
cane.)
 spontaneous, photoperiodism in, 1378
Sacchiphantes (p.1876³) *abietis*, life history,
 10606
 spruce-larch forms, 10606
 Sacco phenomenon, after revaccination
 for variola and tuberculosis, 17197
 Saccolith, of teleosts, histology, 14284
 Saccopharyngidae (Pisces), p.1879²
Saccopharynx (p.1879²), related to apodal
 fish, 8805
 hjorti, 18040
Sacothecium (p.1861⁴), n. sp., 15453
Sacidium (p.1862⁴), n. sp., 15453
 Safranine, photodynamic action on gram-
 negative bacilli, 2687
 Safrol, in volatile oil, from *Illicium parri-*
florum, 1326
Sagittia (p.1871⁴), distr. as indicator of
 hydrographical conditions, Scot-
 land, 10794
 Sainfoin. (See also *Onobrychis*.)
 seed germination and seedling develop-
 ment, var. differences, 8474
Saissetia (p.1876³) *nigra*, control, 15898
 olea, on orange, 14110
 parasitized by *Diversinervus*, 10448
 Sal. (See *Shorea robusta*.)
Salacia (p.1866²), Amazonian and n. spp.,
 8439
oblonga, embryogeny and relationships,
 4806
 Salamander(s). (See also specific types,
 e.g., *Axolotl*, *Triton*.)
 pigmentary physiology, nerve control,
 5652
 plethodontid, O₂ consumption in aerial
 and aquatic media, factors af-
 fecting, 3778
Salamandra (p.1880²), pancreas, fatty in-
 clusions, 9691
maculosa-Triton palmatus, S. ara-T,
palmatus hybrids, mitosis in,
 10738
salamandra, distr. of red form in
 Germany, 12434
 Salamandridae (Amphibia), p.1880¹
 SALAMBONA (Lep.) (p.1877²), type
Zophodia analamprella, 8792
Salasiella (p.1872²) *cornii*, 12316
Salidubella (p.1877²), n. sp., 5135
Salenia (p.1872²) *cincta* (*Garcia* c.), 14225
 Saleniidae (Echinodermata), p.1872³
 Salicaceae (Dicotyledones), p.1865¹
 Salicales (Dicotyledones), p.1865¹
Salicornia (p.1865²), chromosome numbers
 and morphology, 12506
 dist. in relation to soil suction force,
 12582
 herbacea gas exchange in, 1842
 Salicylaldehyde, accumulation in soil, as
 factor in *Pythium* rootrot of
 wheat, 12144
 Salicylate, acetyl, porphyrinuria due to,
 rat, 16444
 effect on ascorbic acid excretion, 13178
 methyl, effect on breast tumors in mice,
 2374
 on growth rate of spontaneous
 tumors, mouse, 8958
 sodium, effect on excretion of vit. C,
 children, 2343
 fibrinogen destroyed by, 3639
 in tuberculosis (exp.) therapy, 13554
 Salicylic acid, absorption by wheat as
 affecting bunt, 5007
 acetyl, effect on heat center, 13073
 therapeutic index, 14793
 reaction with in albuminuria, Bence-
 Jones proteinuria and, 5661
 urinary elimination, spectrographic
 measurements, 14670
 Salientia (Amphibia), p.1880¹
 lymph hearts, synchronism and integra-
 tion of their spinal centers,
 11143
 Salinity. (See also *Osmotic pressure*; *Salt*;
Seawater; etc.)
 changes, effect on marine fauna in
 harbor, California, 12628
 resistance of crustaceans to, 7186
 seasonal, in Bristol Channel, 10797
 of soil, effect on microbial activity,
 1045
 Saliva. (See also *amylase*, *salivary*, under
Enzymes; *Salivary glands*.)
 analysis, biometric evaluation, 7525
 blood coagulation-accelerating principle,
 3632
 blood-group antigens in, *Bacillus per-*
fringens destroying, 6118
 heredity, 13520
 origin, 998, 939
 Ca in resting and activated, 5585
 of caries-immune vs. susceptible cases,
 chem. differences, 13419
Lactobacillus-inhibitory factor, n. 4459
 chemotactic effect on leucocytes, 16403
 composition, diet as affecting, 3751
 and quantity, stimuli as affecting,
 7504
 conditioned response, man, 5680
 effect on *Lactobacillus acidophilus*, 6032
 hormones in, horse, 11071
 identification, by blood groups, 17230
 lysozyme and inhibit in, effect on oral
 microorganisms, 907
 phosphatase, origin and significance,
 5456
 pilocarpine as affecting, dog, 13187
 potassium in, 5602
 rate of flow and pH changes during
 stim., 12643
 reflexes, conditioned, in pig, 12643
 starch digestion, inhibition by subli-
 mate, 11037
 submaxillary, Ca in, source, 3759
 urea in, arecoline as affecting, horse,
 14852
 pilocarpine as affecting, horse, 14851
 uric acid in, significance, 16562
 Salivary gland, importance in newborn
 rats, 3972
 innervation in owls, 4328
 metabolism, drugs affecting, 7748
 pilocarpine as affecting, 18187
 parotid, after inj. of pilocarpine, rat,
 4352
 serous cells, cytology, 2447
 physostigmine and prostigmine as af-
 fecting during anesthesia, 14801
 secretion, pilocarpine conditioning,
 3748
 spirochaetes in, *Anopheles*, 14189
 structure in octopods, 703

submaxillary, secretion, nerve stim.
as affecting, 12898
sensitization by sympathetic denervation, 7523
of tsetse fly, trypanosomes in, electric charge, 6718
Salix (p.1865¹). (See also *Willow*.)
tax., 1158, 2845, 6381
spp. new to Morocco, 2852
caerulea, anatomy, 17559
cineræa, gynaeceum, in relation to origin of angiosperms, 1169
cordata nodal adventitious root, 1166
laevigata, *Taphrina aurea* on, 6351
Salmine, effect on blood coagulation, 1957
Salmo (p.1879²). (See also *Salmon*; *Trout*.)
initial feeding time, 12621
myotomes, structural and functional differentiation, 5915
Salvelinus hybrids, 12426
ulcer disease of spp., 15391
farto, eye implants, 8044
gairdneri, pigment, in muscle, 6948
gairdneri trideus, diet supplements, 16285
trideus, planting in streams, effects, 14410
sex differentiation, folliculin as affecting, 5900
salar, low catches, factors affecting, 12626
migration after transplantation, 158
populations, control of fish-eating birds as affecting, 12632
sebago, in Wisconsin, 3816
trutta, biology, 141
food and feeding in relation to environment, 1868
Salmon. (See also *Oncorhynchus*; *Salmo*.)
age analysis of commercial catch, Scotland, 9056
Atlantic, thyroid gland, embryonic development, 17039
breeding habits, 5158
canned, firmness measured by penetrometer, 6259
Cu in, in breeding season, 12827
dog, body measurements, wts. and scale studies, 7237
gill cover, defects, 764
migration of adult, 9058
along Scottish coast, 3532
tagging expts., 9054, 9057
of N. W. coast of Scotland, size and age analysis, 9059
Pacific, myxosporidian parasite in, 10521
pigments in muscle, 6948
psychology, 10629
rearing from freshly fertilized eggs, apparatus for, 16280
sockeye, in Cultus lake, types, 5406
tagging expts., 153, 3529, 7241
wt. length detns., 8812
Salmonella (p.1861¹). (See also *Paratyphoid* group of bacteria.)
antigenic factors of types, chem. and antibody relations, 17174
quantitative ratio in strains, 17174
avian leukosis and, 6223
Breslau form, ducks infected by, 6255
differentiation by specific receptors, 831
fish infected by, 15875
food-poisoning forms, incidence in meat, 4682
fowl infections by, serodiagnosis by egg-yolk agglutination, 2603
glucido-lipidic antigens of *Eberthella* vs. *Pasteurella* vs., 893
of Shiga dysentery bacilli vs., 803
glucido-lipidic complex, specificity, 2550
growth, in butter and milk at air temp., 1040
H-antigens, induced changes in, 15139
hippopotamus infection by, 2718
immunological relations of polysaccharides of mucoid forms, 9874
isolation from excreta, media for, 11658
localization of infections by, chronic cholecystitis and, 18606
nondialyzable products, specificity, 2547
nutritive requirements, 11790
in paratyphoid of chicks, types, 6239
paratyphoid strains, agglutination test for, specificity and non-specificity, 799
phases, modified Wassén technic for isolating, 10077

Salmonella (continued)
rat-mouse destroying forms, non-pathogenicity to hares, rabbits and pheasants, 6243
residual antigens, specificity, 2550
somatic and "X" agglutinins to, in various sera, 17127
swarming, single-phase antigens obtained by, 9845
in urogenital tract infections, 15263
abortus canis, from canine abortion case, 11635
abortus-equi, phase variation in, 13697
serological relations of phases, 13697
aertrycke. (See also *S. typhimurium*.)
immunization to, by lanolin-antigen mixture, 4478
bareilly, avian leukosis and, 6223
braenderup, from gastroenteritis of man and cat, 10033
choleraesuis. (See also *S. suspestifer*; *Hog cholera*.)
Kunzendorf strains, specific components, 17293
types in U. S. A., 17293
enteritidis. (See also *Bacillus e.*; *Paratyphoid fever*; *Paratyphoid group of bacteria*.)
carbohydrate complex, effect on tumors, rats, 4196
immunization to, in laboratory animals, 398
incidence in house rats in Tokyo, 13643
non-specific resistance to exp. infection by, 13404
strains for Gruber-Widal reaction, 798
var. *Danzysz*. (See also *Rat*in.)
incidence in house rats, Tokyo, 13643
var. *dublin*, rats spreading in animals, 2709
gallinarum. (See also *Shigella g.*)
S. pullorum compared culturally and serologically, 4672
glostrup, enteritis in man and dog due to, and dissociation, 15417
hirschfeldii. (See also *Bacterium paratyphosum C.*)
Vi-antigen, 8154, 13475
morganii. (See also *Proteus morganii*.)
strains from epidemic infantile dysentery, 18612
paratyphi. (See also *Paratyphoid fever*; *Paratyphoid group of bacteria*.)
heterophile antigen production induced in vitro, 11534
in vivo, 11535
incidence in paratyphoid, 17371
serological comparison to *Eberthella typhosa*, 807
strains for Gruber-Widal reaction, 798
variants, from typhoid cases, 962
B, antigens, prep. of type- and group-phase, 4443
latent exp. infection, 13606
pullorum. (See also *Pullorum disease*.)
metabolic reactions, 13602
receptor analysis, 4523
serodiagnosis by egg-yolk agglutination, 2603
of infections, 13663
S. gallinarum compared culturally and serologically, 4672
whole blood vs. standard tube agglutination tests for, 2715
schottmuelleri. (See also *Bacterium paratyphosum B*; *Salmonella paratyphi B*; *Paratyphoid*; *Paratyphoid group of bacteria*.)
agglutination tests with formalized suspensions, statistics, 13448
agglutinin titers, cod liver oil or bactericidal extracts as affecting, 13460
epizootic in mouse colony, 11719
exp. fever induced by, inhibition by heterobacteria, 9877
incidence in paratyphoid, 17371
paratyphoid epidemic due to, 10007
from water supply, 2673
strains for Gruber-Widal reaction, 798
suspestifer. (See also *S. choleraesuis*.)
fatal endocarditis due to, 2648
histopath. and anatomy of paratyphoid of pigs associated with, 2705
para-C, fatal infection in young pigs, 18667
immunization to, 18667
var. *kunzendorf*, latent exp. infection, 13606

Salmonella (continued)
typhi, reversibility of alpha and beta phases, 11792
typhimurium. (See also *Bacillus enteritidis* Breslau; *S. aertrycke*; *Mouse typhoid*.)
antibacterial immunity to, mechanism, 800
antibody analysis, 4481
antigenic analysis, 4481
epidemic in guinea pigs spread by rats, 2709
fatty substance, 10073
infection by, mechanism, 800
as influenced by lecithin-broth culture, 17805
latent exp. infection, 13606
receptors, disinfectants as affecting, 2593
role of inborn resistance factors in, 13659
toxic, 9827
toxic action compared, 4481
virulence, immunity and, 800
resistance to, induction by typhoid vaccine, 9829
strains, biochem. and serological, 4444
var. *copenhagen*, in pigeons, 4444
purulent arthritis in foal due to, 8320
Salmonella group of bacteria, sugar-alcohol utilization by, 2757
Salmonellosis, from fish, 10053
Salmonellae (Piscis), p.1879²
Salpichroa (p.1867²), n. spp., 2846, 8432
Salpiglossis, bud development, x-rays as affecting, 15753
plastid and anthocyanin variegation, 8931
Salt(s). (See also *Electrolytes*; *Ions*; *Salinity*; and specific salts, e.g., *Sodium chloride*.)
absorption by roots, effect on respiration, 6602
in various zones, *Vicia*, 6559
accumulation in plant cells, kinetics, 15701
action currents produced by, *Nitella*, 1392
in agglutination reactions, 4495
alkali, effect on microbial activity in soils, 1045
balance, chloride absorption by anal gills of larvae and, 5482
in butter, indicators used in estimation, 8086
curing, of fish, mechanism, 10056
in diet. (See under *Diet*.)
effect on:
diabetes insipidus, 14980
posthypophysectomized rats, 9659
sugar cane vars., Argentina, 4895
6461
tyrosinase, from potato, 14029
water imbibition by brain tissue in vitro, rat, 181
excess, effect on histamine toxicity, rat, 11242
inorganic complex, as protein precipitants, 16361
neutral organic, effect on interfacial tension, 16306
path of movement in plants, 15748
in rain water, factors affecting, 2938
requirement, of range cattle, 15101
solvating, relation to protoplasmic contraction in *Vorticella*, 10520
spray, damage to trees, insect infestation and, 12205
tolerance of plants to, factors affecting, 4935, 10194
Salt solutions. (See also *Sodium chloride*, *solutions*.)
brine, acidulated, bacteria from, pH relations, 6272
bacon-curing, bacterial behavior in, 1763
pickle, film yeasts from, 17405
effect on bacterial respiration and yeast cell vol., 15396
injections in cholera, man, 7740
effect on plasma protein, 12643
isotonic, massive infusions, death due to, 9144
osmotic pressure. (See *Osmotic pressure*.)
physiological, bottle caps for, 228
comp. as affecting tissue metabolism, 16468
effect on water imbibition by brain tissue, 181
Salt water. (See *Salinity*; *Sea water*; *Water*, *brackish*.)
Saltation. (See *Mutation*; *Variations*.)
Salvadora (p.1880⁴), taxonomic study, 6981

- Salvadoraceae (Dicotyledones), p.1866⁴
 Salvans. (See *Asphenamine*.)
Salvelinus (p.1879²), biology,10814
fontinalis, diet supplements for,16285
 feeding expts.,5409, 12621
 planting in streams,14410
 scales, order of appearance,10806
 transportation method,16281
 ulcer disease,15891
Salvia (p.1867³), n. spp.,2882
8444, 10119
 cytology of several spp.,1697
 distr. in Americas,17522
scalaria, volatile oil content,1341
Salvinia (p.1863⁹), distribution,1100
natans, polyploidy, and reproductive
 forms,17510
 Salviniaceae (Pteridophyta), p.1863³
Samaropsis † *scotica* (Cb),8368
Sambucus (p.1867³), n. f.,6381
Samia cecropia eye, dark-adapted, response
 to white light illumination,4003
 Sample(s). (See *Sampling*.)
 Sampling. (See also *Populations* (sta-
 tistical).)
 distr. of range in samples,16221
 and selection from normal population,8971
 error, in forest surveys,1291
 in estimating insect populations,8967
 homogeneity of variances in samples
 from multivariate population,16218
 random vs. systematic,16218
 randomization methods, disadvantages,1817
 of range plots, methods,17571
 tests, for equality of variances in
 sample,16220
 of randomness,7166, 1811
 theory, recent advances,7168
 Z-test, generalization,8970
 "Samudra phenia," source and medicinal
 properties,1821
 Sanagapocken. (See *Alstrom*.)
 Sand, phosphate retention by, relation to
 tomato culture,6508
 Sand dunes. (See *Dunes*.)
 Sandalwood. (See also *Santalum*.)
 insects associated with,14058
 spike disease (virus), biometric and
 chemical diagnosis,4982
 host plants as affecting,10275
 physiological diagnosis,3163
 Sandfly(ies). (See *Culicoides*; *Phlebotomus*.)
 Sandstone, silicosis and, in metal grinders,9667
 Sango stop, as pulmonary hemostatic,16434
Sanguinaria canadensis, alkaloides of, as
 affecting resistance to *Phytophthora*,15849
 Sanitation. (See also *Health*; *Hygiene*;
Industrial hygiene; and under
Water.)
 of air, by ultraviolet light,11701
 development in Canada,11678
 of food and drink dispensaries,8299
 of ground waters, Germany,15334
 need for, in sub-tropics,8723
 organization, in Brazil,13635
 in Panama, malaria and,12270
 plumbing in relation to, safe and unsafe
 fixtures,11693
 programs, appraisal,15348
 of Rio de Janeiro population,13638
 in rural-urban area,15309
 social insurance and,13655
 of swine, stomach worms control and,17908
 of waste liquors from chemical plants,15333
Sauvignier guineensis, fiber and tracheid
 development,10169
 Santalaceae (Dicotyledones), p.1865²
 Santalales (Dicotyledones), p.1865²
 Santalina, from *Pterocarpus*, chem.,12035
Santalina (p.1867³), reduced to section,11885
Santalum (p.1865²) *album*, ecology, hosts,
 regeneration,10260
 host plants and spike disease,10275
ellipticum, redefined,13757
 Sap, acids in, birch and maple,1395
 ascent, path in plants,15748
 composition, fertilizers as affecting,
Elusine,3056
 exudation. (See *Bleeding* (plant);
Guttation.)
 movement. (See *Translocation*; *Transpira-
 tion*.)
 osmotic pressure in, causes and detn.,3074
 yield, of nipa palm in relation to
 humidity,12569
 Sapamines, saponin-like action,16772
Saperda tridentata, feeding injury on elms
 as site of *Ceratostomella* infec-
 tion,15811
 Sapindaceae (Dicotyledones), p.1866²
 Sapindales (Dicotyledones), p.1866²
Sapindus (p.1866²), n. sp. (N),17475
trifolatus, embryogeny and relation-
 ships,4806
 Saponin, in Boraginaceae,1834
 carcinogenic action,2871
 effect on bacteriophage absorbed by
 blood,953
 on gastric mucosa,12893
 expectorant action,5758
 -like action, of synthetic chemicals,16772
 as mosquito larvicide, from *Gardenia*
 and *Zanthoxylum*, Assam,12223
 in separation of malaria parasites from
 red cells,15953
 toxicity to fish,14832
 Sapotaceae (Dicotyledones), p.1866⁴
Sappinia (p.1861²) *pedata*, morph., life
 hist.,11832
Saprinus (p.1876¹), tax.,6888, 10596
 Saprochaetaceae (Algae) (p.1860³),
 new family,15433
 Saprochaete (Algae) (p.1860²) *sac-
 charophila*,15433
Saprolegnia (p.1861³), spp. parasitic to
 fish,15467
parasitica, host range,11755
(Isoachyla),15467
 pathogenesis of infections by,11755
 Saprolegniaceae (Fungi), p.1861³
 mitochondria and vacuolar systems,7101
 Sapromyzidae (Diptera), p.1877⁴
 Sapwood. (See *Wood*.)
Sarcina lutea, senescent phase of aging
 cultures, mechanisms,17471
Sarcophilus (p.1865¹) *harriganiae*,6392
Sarcococca (p.1866¹) n. comb.,11886
Sarcodia (p.1860⁴), n. sp.,8384
Sarcodina (Protozoa), p.1868²
Sarcogyna (p.1862¹), tax.,6364, 8413
Sarcolemma. (See under *Muscle*.)
 Sarcoma. (See under *Tumors*.)
Sarcosaurus (p.1863³), n. sp.,6369
 Sarcophagia, in sheep, body-fluid chem-
 istry and,15389
 incidence and control,15388
 Sarcophagidae (Diptera), p.1878¹
Sarcophago (p.1878¹) *alcedo*, parasite of
 dung beetles,12860
aldrichi, parasitism on *Malacosoma*
dissiria,15927
securifera, larvae, ingested, fate of, 1515
 Sarcopes, as affecting leather,10440
 Sarcopitidae (Arachnida), p.1874⁴
Sarcophyme (p.1867³), n. sp.,6431
Sarcostemma acidum, composition,3045
 Sardine, meal, protein in, as feed for
 poultry,15125
 migrations, tagging expts., 1863, 12627
 Sardinia. (See also *Sardine*.)
Sardinops (p.1879²) *caerulea*, abundance,
 factors affecting,9050
neopilchardus, spawning and develop-
 ment,12631
Sargassum (p.1860⁴), n. sp.,8384
 Saridon, analgesic action,9537
 † SARKASTODON (p.1883³) *mongoliensis*
 (E),7043
Sarothamnus (p.1866²) *scoparius*, note, 1143
Sasa (p.1864⁴), tax.,6387, 6388, 6389
Sasakina (p.1872²), n. sp.,6825
Sassafras (p.1865³) † *acutibulum* (K) from
 Minnesota,17476
 Satellites. (See under *Chromosomes*.)
 Saturniidae (Lepidoptera), p.1876⁴
 Sauerkraut, factors affecting,1034
 fermentation, factors affecting,2729
 regulation,15397
 pink color due to yeasts,2729
 vit.-C content and factors affecting,6268
Saurauja (p.1866²), n. sp.,2861
Sauria (Rept.), p.1880² (See *Lizards*.)
Saurischia (Reptilia), p.1880⁴
Saurolaphus (p.1881¹), proboscis in, discus-
 sion,14291
Sauromalus varius, tumors, *Bacterium sauro-
 mali* causing,11728
Sauromarptis (p.1881¹), n. subsp. in genus,
7022
 Sausage. (See under *Meat*.)
Sauvagesia (p.1866²) *erecta*, anatomy and
 biology,1139
 Savanna(s). (See *Grassland*.)
 Saw, electric bone,12741
 Sawfly, control on conifers,8652
 European. (See *Diprion*.)
 larvae, parasitized by *Syrphus* larvae,10491
 in New Jersey,14136
 spruce, life history and control,12206
Saxegothaea (p.1864¹), in Argentina, 15484
 embryogeny,11915
 ovule gametophyte and proembryo,11921
 Saxicavidae (Mollusca), p.1872⁴
Saxicola (p.1882¹) *r. rubetra*, bird banding,
14296
 Saxifragaceae (Dicotyledones), p.1865⁴
 Scabies. (See under *Dermatoses*.)
 Scale(s), of fish. (See under *Fish*.)
 Scale insects. (See also *Coccidae*; under
 the genera, e.g., *Chrysomphalus*;
 and *Citrus scale*, etc.)
 atlas of North American spp.,10605
 black. (See *Saissetia oleae*.)
 Florida red, control oils for,10403
 greedy. (See *Citrus scale*, gray.)
 nigra. (See *Saissetia nigra*.)
 obscure. (See *Chrysomphalus obscurus*.)
 oyster shell. (See *Lepidosaphes ulmi*.)
 purple. (See also *Lepidosaphes beckii*.)
 control, by oils,10403
 of S. Africa,18019
 Scabiegmidiae (Annelida), p.1871³
Scalopus (p.1882¹), n. sp.,18100
aquaticus intermedius, *Hymenolepis* from,
14209
 Scalp, yeastlike organism from,971
 Scarabaeidae (Coleoptera), p.1876²
 Scarabaeoidea (Coleoptera), p.1876²
 Scarification. (See *Seed*, germination.)
 Scarlatina. (See also *Streptococcus* spp.,
Dick test.)
 antitoxin, prophylactic failures, 11553
 book,10012
 complications, vs. antitoxin therapy,
9872
 as influenced by serum vs. sulfanila-
 mide therapy,13427
 convalescent serum, effect on strepto-
 coccic septicemia after a burn,
9855
 correlation of Schick test and blood
 serum antitoxin (diphtheria)
 in,17329
 Dick test reliability,4471
 epidemic, milk-borne,15315
 epidemiology, climatic and racial fac-
 tors,989
 flocculation in toxin-antitoxin mixtures,
4438
 hemolytic streptococci from, serol. and
 biochem. study,6193
 serological strains,881
 strains in throats of school children
 vs.,6176
 immunization, by adsorbed toxin,823
 antibacterial vs. antitoxic,9864
 by purified erythrogenic toxins,17173
 recommended procedures,11560
 by streptococcal toxin, serol. effects,
9891
 inclusion bodies in, etiological relations,
11613
 mortality statistics,15353
 otitis media in, incidence, factors in
 and therapy,11713
 pathogenesis,9864
 sero-chemoprophylaxis,11553
 sero-prophylaxis and therapy,17176
 serotherapy, specific vs. non-specific,
13503
 streptococcus strains associated,8234
 correlations,4519
 streptococcus toxin, flocculation with
 antitoxin,13415
 streptococcus types in,4490
 tissue cultures from blood filtrates,11613
 toxin, adsorption on Al(OH)₃,823
 effect on embryonic chicks,11526
 Scarlet fever. (See *Scarlatina*.)
Scatella (p.1877⁴) *subguttata*, ecol. and life
 hist.,18001
 SCAURA (Hym.) (p.1878⁴), subg. of
Trigona,6928
Scelopocantha (p.1876³), n. sp.,10595
Scelio (p.1878²) *fulgidus*, egg parasite of
Chortocetes, Australia,15929
Scenedesmus, photosynthesis in, HCN as af-
 fecting,15782
obliquus, metabolism HCN as affecting,
14016
 Scent. (See *Odors*; *Olfactory*; *Smell*.)
 Schamburg's disease, *Cryptococcus haema-
 topophilus* associated,13620
 etiology,8249
 Schaufuss, Coleoptera drawings published,
6876
 Schaumann's disease, heterogenetic anti-
 bodies in forms,4458

SCHAUSANA (Lep.) (p.1876*) *altama*, Schick test. (See also *Corynebacterium diphtheriae*; *Diphtheria*.)
 carrier rates and, after diphtheria immunization,7815
 correlation with blood serum antitoxin (diphtheria) in scarlatina, 17329
 new toxin for,4517, 17355
 reliability compared to Dick test, 4471
 Schiff-Auerbach phenomenon, in wasting diseases,7870
Schiffnerula (p.1861*) *paraparensis*, on *Bursera*,18738
Schistosoma (p.1870*) *korhaani*, from *Afrota*,15987
Schistosomys ornata, seasonal occurrence off Plymouth,1850
Schistosoma. (See also *Schistosomiasis*.)
 in natives, Nigeria,8690
bovis, *Bulinus* as host, Sardinia,3242
haematobium, Sb therapy, eosinophilia after,14178
 bronchial allergy due to,15149
Bulinus as host, Sardinia,3242
 mollusk as intermed. host for, E. Africa,1574
indica, in liver, buffaloes, India,17913
japonicum, new intermediate host for,10557
mansoni, Sb therapy, eosinophilia after,14178
 concomitance with *Fasciola*,14192
 infestation, 7 cases,8705
 mollusk as interm. host for, E. Africa,1574
spindale, dermatitis due to,1544
turkistanicum, in N. China,8693
Schistosomium (p.1870*), (*Cercaria* *jaeschki* n. sp.,3298
Schistosomiasis. (See also *Schistosoma*.)
 in cattle,1545
 diagnosis and therapy,8705
 eosinophilia after Sb treatment,14178
 in Italian E. Africa,1574
 nervous and mental symptoms, treatment,15961
 sera, u.-v. absorption spectra,12251
 skin lesions, in negroes, Africa,12256
 therapy, S. Africa,10484
 urinary, germanin in therapy,8697
Schistosomidae (Platyhelminthes), p.1870*
Schizocorymbium (p.1864*), tax.,2828, 8427
Schizaceae (Pteridophyta), p.1863*
Schizocosa (p.1874*) *crassipes*, spermatogenesis,16162
Schizocystidae (Protozoa), p.1868*
Schizodon vittatus, spawning induced by pituitary extracts,5895
Schizoglossum (p.1867*), n. sp.,2870
Schizogregarina (Protozoa), p.1868*
Schizomycetes, p.1861*
Schizonura lanigera. (See *Eriosoma lanigera*.)
Schizonotus (p.1878*) *sieboldi*, parasite of willow leaf beetle, L. H. and bionomics,10447
Schizophrenia. (See under *Psychoses*.)
Schizophyllum commune, as cause of timber decay, in Philippine Is.,17757
Schizopodium (p.1864*) *mummi*, New York (D),2785
Schizopoda (p.1876*) key,17990
Schizosaccharomycosis. (See *Mycoses*.)
Schizotaenia spp., in muskrats,12298
Schizotergites (p.1873*), morph.,16012
Schizothrix (p.1860*), tax.,8385, 15437
Schizymenia (p.1860*) *undulata* (*Grateloupia longifolia*),4729
Schlegelia (p.1867*), n. sp.,2827A, 2882
Schleichera trijuga, culture of lac on, India,14102
Schoblia (p.1873*), generic limits,15757
 Schoen, biography,10704
 Schoenobiinae (Lepidoptera), p.1877*
Scholastes (p.1877*), n. sp.,14254
Schongastia (p.1874*), n. sp. from New Guinea,17980
 yeomani, as vector of typhus,984
 Schrader, critical notes,3307
 Schulz, O. E., biography,8894
Schwartzella (p.1870*) *nodulosa*, in buffalo, Bulgaria,10500
SCIADOCORINUS (Echin.) (p.1871*) (Cb),10555
Sciadocephala (p.1867*), n. spp.,2827A
Sciadophyllum (p.1866*), n. sp.,6437
Sciadopitys (p.1864*), embryogeny compared with *Sequoia*,10163
 of Oligocene, Germany,4724
verticillata, new nematode parasite,17958
 rooting of cuttings, plant hormones as affecting,13983
Sciadotenia (p.1865*), n. sp.,2865

Sciadenidae (Pisces), p.1880*
Sciaphila (p.1864*), n. sp.,8426
Sciara (p.1877*) chromosome behavior, inheritance and sex determination, review,5298
ocellaris, chromosome elimination in germ cells,8911
 germ cells, chromosome elimination from,9780
Sciatic nerve. (See *Nerve, sciatic*.)
 Science, in agriculture, book,18826
 medical, research clearing house in,9073
 method, philosophy,2
Scilla. (See *Squill*.)
 Scillaren-B, effect on chromatophores, toad,5761
 Scillaridin A, potency,513
Scina (p.1874*) *wagleri*,16015
Scina (p.1860*), n. sp.,8384
Scincidae (Reptilia), p.1880*
 eye, sclerotic plates, structure,5879
Scinidae (Crustacea), p.1874*
Sciomyzidae (Diptera), p.1877*
Sciopus (p.1877*), n. sp.,14256
Scirpophaga (p.1877*) *auriflua*, control of, by *Stenobraccon*,8667
Scirpus (p.1864*), n. sp.,8426
olneyi, rel. to mosquito breeding, Md.,12214
Scirrhia (p.1861*) *gambiae*, on *Gahnia*, 8407
Scirtothrips (p.1875*) *citri*, control with tartar emetic,10388
signipennis on banana, biology and control, Queensland,17854
 control, Queensland,17853
Sciuridae (Mamm.), p.1882* (See also *Squirrels*.)
Sciurus (p.1882*) *carolinensis*, range, Virginia,5243
leucotis, range, Virginia,5243
niger rufiventris, utilization of Osage orange in Kansas,10827
vulgaris, exptl. echinococcosis in, 12248
 light absorptive power of various parts of eye,9463
Sclerenchyma. (See *Stone cells*.)
Sclerocystis (p.1861*) *coccigena*, emend.,11820
Scleroderma. (See under *Dermatosis*.)
Scleroderma (p.1862*), fruit body, anat. and development,15466
Scleroma, serum reactions in,4470
Sclerosis, amyotrophic lateral, vit. B₁ as affecting,9624
 arterial. (See *Arteriosclerosis*.)
 multiple, vs. disseminated encephalomyelitis,16908
 etiology,11306
 monocular nystagmus with paresis of horizontal ocular movements in,7638
 myelo-, leucoerythroblastic anemia and,7888
 tuberos, path., and genuine epilepsy,16953
 syphilis in etiopathogenesis,2407
Sclerostachya (p.1864*), n. sp.,8427
Sclerotinia (p.1862*), blossom blight of *Camellia*,17748
 on deciduous fruits in California,1482
 stem blight of stocks due to,15890
carunculoides, on mulberry, dist. in U. S. A.,15889
fructicola, apothecial development prevented by cyanamide,17834
 causing peach brown rot, control,10343, 10353
 control of apothecial phase by cyanamid,10374
 on stone fruits,17749
fructigena, growth, alternating light periods as affecting,6594
graminearum, on cereals, control by tillage and liming,15881
 environmental relations of infection,15800
 infection factors,15804
 life cycle and pathogenicity, 15809
laxa, on apricot, varietal resistance,14079
 dist. and hosts, in California,10343
 on stone fruits, in Washington, 17749
polyblastis (*Botrytis*),15447
Sclerotis p. punctatus, parasites, Florida,15948
Sclerotium. (See under *Fungi*.)
Sclerotium (p.1863*) *bataticola*, on tobacco, as factor in brown rootrot,10347
rolfsii, basial stage of and inheritance studies,4963
Scolelepis fuliginosa, gregarine parasite (*Selenocystis*),1577
Scoliopelta (p.1877*) *grandis*,6902

Scoliopterus (p.1873*), n. spp.,6831
Scoliosis. (See *Vertebral column*.)
Scolopacidae (Aves), p.1881*
Scolopendra (p.1873*), n. spp.,6829
 gregarine in,6761, 12288
Scolopendridae (Myriopoda), p.1873*
Scolopendrium vulgare, chromosome numbers from crosses with aposporous type,5307
 segregation from aneuploid sporophyte,5306
Scoloplos (p.1871*), syn.,17962
Scolopopleura (p.1873*), n. sp.,8748
Scolothrips (p.1875*) *seamaculatus*, L. H., predatism and cannibalism, 10446
Scolytidae (Coleoptera), p.1876*
 estimation of numbers,3199
Scolytidae (Coleoptera), p.1876*
Scolytus, on *Abies*, relations with wood stain fungi,1428
multistriatus, on elm, twig crotch injuries due to,14137
Scomber scombrus. (See *Mackerel*.)
Scombridae (Pisces), p.1879*
Scopelarchidae (Pisces), p.1879*
SCOPELLA (Fungi) (p.1862*),15455
Scopolamine, effect on plasma loss in guanidine poisoning,7785
 on tail raising reaction of morphine mice,13162
 isomers, effect on nervous system,16733
Scopariopsis (p.1863*) *danica*,6338
Scorbutus. (See *Scurvy*.)
Scorpaena (p.1880*) *guttata*, embryonic and larval stages,18042
Scorpaenidae (Pisces), p.1880*
Scorpaenodes (p.1880*), n. sp. from Hawaii,8815
Scorpion. (See *Scorpiones*.)
Scorpiones (Arachnida), p.1874*
 venom, preservation and antiserum production,17201
 toxicity,11215
Scorpiurus sulcata, as soil indicator, 10784
Scotinoma (p.1877*), n. sp.,14254
 Scratching, mechanism, medullary center for,14724
 Scratching itch. (See *Pseudorabies*.)
 Screw worm. (See *Cochliomyia*.)
Scrophulariaceae (Dicotyledones), p.1867*
Scurriopsis (p.1872*) + *schneidii* (J), 15948
Scurvy. (See also *Vitamin C*.)
 adrenalin in blood and adrenals, thyroidectomy and,16918
 blood, vit. B₁ in,4261
 capillary resistance, vit. C and,11267
 clinical and therapeutic problems, 5850
 effect on gastric acidity, guinea pig,12906
 electric potentials and wound healing in,200
 in Greenland, study,14987
 infantile, vit. C in tissues,16921
 latent, tuberculosis and, guinea pig,7891
 muscle lactic acid in, guinea pigs,472
 reticulocyte count in, mice,326
 vit. A in liver, thyroxin as affecting,11337
Scutellaria (p.1867*), review and n. sp.,6404, 17523
Scutellidae (Echinodermata), p.1872*
Scutigera immaculata, soil distr. factors as affecting,9008
Scydmaenidae (Coleoptera), p.1876*
 Scymnol, review,14441
Scymnus minimus, enemy of red spider mite,5018
Scyphozoa (Coelenterata), p.1869*
Scytalocrinus (p.1871*) (Cb), n. sp.,10555
Scytonema (p.1860*), n. spp.,8385, 15437
Scytonemataceae (Algae), p.1860*
 Sea. (See *Littoral; Ocean; Oceanography*.)
 Sea cow, dentition,12449
 Sea cucumber. (See *Holothuriidae*.)
 Sea food. (See also *Fish; Oysters*; etc.)
 packing and handling, health problems in,15322
 Sea lion(s). (See *Zalophus*.)
 Sea otter, food,5230
 Sea urchin(s). (See genera, e.g., *Arbacia*, *Paracentrotus*.)
 Sea water. (See also *Salinity; Water, brackish*.)
 bacterial analysis, apparatus for depth sampling,4718
 bacterial distr. in harbor,17473
 bacteroprovocative irritant,4216
 nitrate-phosphate ratio,1846
 phosphate detn.,1845
 phosphate distr. in,1849
 Seal(s), elephant, concession in Kerguelen on west coast, England and Wales, 5247

- Season. (See also *Climate*; *Periodicity*.)
 effect on:
 capon comb response to androsterone, 12643
 cells of ant. lobe of pituitary, toad, 15022
 chronic rheumatic activity, heart disease and, 13119
 composition of North Sea plankton, 12607
 coronary occlusion and heart failure, 4057
 emergence of chironomid flies, 9043
 hematopoiesis in *Bufo*, 7936
 human birth weights, 13190
 infantile malaria, Bengal, 15972
 marine algal communities, 121
 reproduction, *Strongyloides*, 15959
 response to low temps. in fish, 16282
 to thyrotropin, frog, 9331
 seminal vesicles, frog, 7974
 seriatic growth in body wt. infants, 5796
 soil-bacterial numbers, 13686, 13687
 soil distr. of symphyllans, 9003
 testis of passerine bird, 7581
 variations of nanoplankton in Mediterranean, 16270
 variation, in body water response to pituitrin, frog, 14609
 in chem. comp. of fish, 10036
 in clasp reflex, frog, 5676
 in Cu in frog, 12829
 in eosinophilic counts in asthma, 13256
 in gonadotrophin content of rabbit pituitary, 14624
 in Mg sensitivity, frog heart, 4172
 in phosphatide of frog heart, 4172
 in plasma phosphatase, children, 14872
 in pulmonary vital capacity, 7527
 in red cell count and Hb, man, 3619
 in response to anesthetics, mice, 4108
 in sweat gland activity, 3670
 in thyroid activity, sparrow, 5642
 in thyroid and adrenal cortex, 2157
 in thyroid antagonism to heat effect of thyroxin, guinea pig, 3864
 in *Trypanosoma cruzi* infection, rat, 10497
 in vit. C in milk, 5569
 in spinal fluid, man, 9130
 Seaweeds. (See *Algae*.)
 Sebaceous glands. (See under *Glands*.)
 Sebacia (p.1862³) calcea, hymenal organization in, 4741
 grisea, descriptive notes, 2312
 Sebastes (p.1880²) marinus, *Sphyrion* parasitizing, relationships, 16019
 Sebdenia (p.1860⁴), n. sp., 8384
 Secale (p.1864³). (See also *Rye*.)
 chromosomes, as affected by colchicine and acenaphthene, 16154
 haploid, induced by heat, 14348
Triticum hybrids, chromosomes, fertility, 1756
 cytogenetics of non-amphidiploid derivatives of, 1749
 inheritance of hairy necks, 1754
 Secondary thickening. (See *Root*; *Stem*.)
 Secretagogues, standardization, 222
 Secretin, amino acids in, 3786
 assay, 11038
 effect on:
 biliary and pancreatic papillae, rabbit, 13137
 blood flow in pancreas, 9344
 pancreatic ampulla, 2090
 inhibited by arsenic, 3786
 isolation, crystallization and assay, 3828
 test of pancreatic function, 16563
 Secretion. (See also *Glands*; under organs, e.g. *Stomach*, *Pancreas*; under specific secretions, e.g. *Insulin*, etc.)
 cycle of thymus in *Necturus*, 9695
 of ectodermal glands of arthropods, 9790
 and lepidosomes in pulmonate Gastropods, 7115
 of lipids, by leaves, 4957
 of organs, standardization of substances causing, 222
 rôle of Golgi apparatus in vertebrates and invertebrates, 2479
 sex-determining, in *Chlamydomonas*, 10305
 Section(s). (See also *Microscopical technic*.)
 frozen, staining method, 3002
 paraffin, distortion, 16115
 of tissues, marking, 16124
 Sectioning. (See also *Microscopical technic*.)
 of woody plants, 11913
 Sedative(s), action, of acetylcholine, 14558
 of drugs, detn., 16382
 Sedge(s). (See *Cyperaceae*.)
 Sedimentation, for detn. of particle-size distr. sulphur, 12233
 of erythrocytes. (See under *Erythrocytes*.)
 velocity detn. in air-driven tops, 5497
 Sedum, notes, 10136
 Seed. (See also *Embryo*, *plant*; *Endosperm*; *Embryogeny*; *Ovule*; *Seedling*; *Sporc*.)
 bluegrass, obtaining pure samples and germinating, apparatus, 2953
 -borne disease, manual for detn., 12163
 -borne parasites, detection, 1473
 of *Cajanus* and *Canavalia*, composition and food value, 2935
 of cereals, pathogenicity of fungi infesting, 3169
 certification, in Germany, 17600
 chemistry, *Magnolia grandiflora*, 1315
 coat, structure in *Myrmecodia*, 2916
 color, inheritance, *Melilotus alba*, 16169
 of conifers, variability in, 13965
 of cotton, delinting with H_2SO_4 , 1189
 decay by *Rhizoctonia*, control by bacterial antagonism, 6293
 development, in *Boerhaavia*, 1171
 Lobelia, 15520
 Tinospora, 11920
 Typha, 4766
 Utricularia, 2907
 disinfection, of beans, 3155, 3169
 of cereals, Manitoba, 3169
 commercial treating stations, Germany, 12161
 of cotton, 1481, 17828
 of kale, by chloropierin, 3169
 of lettuce, 1475
 measurement of interfacial friction in dust treatments, 6685
 of peas, 8626
 soil microorganisms in, 1464
 of sugar beet, 1482, 3169
 of wheat, injury to germination by, 1458
 dispersal, 9039
 mechanism in *Calluna*, 2909
 of *Pinus taeda*, 15660
 dormancy. (See *Dormancy*.)
 fats in, *Tropaeolum*, 10292
 forest, of conifers, 3029
 viability, cutting tests for, 1311
 fungus infection, in rice, 10350
 germinating, centrifugation as affecting, 1705
 germination, of *Calophyllum inophyllum*, method of hastening, 15671
 changes in gluten during, wheat, 3079
 of conifer seed, stimulation by pre-treatment, 17660
 of cotton, 1481
 hindered by HCN, *Vaccaria*, 3080
 as influenced by:
 electric grounding, 8096
 enzymes, *Pisum*, 12105
 factors, *Festuca* spp., 8467
 humidity at maturation period, Lima beans, 15619
 light, mistletoe, 12074
 moon's phases, 8543
 scarification, grass seed, 10312
 S compounds, lettuce, 17696
 temp., field beans, 6480
Trifolium, 13999
 temp. and light, lettuce, 1369
 temp. and moisture, hops, 6588
 pine and spruce, 15667
 thiocyanate, 4956
 ultra-violet, 14012
 x-ray, 12643
 x-rays and soaking, wheat, 1385
 of oats, carboxylase activity during, 10385
 in puddled soils, 2969
 of rock-garden plants, 6586
 of sainfoin, 8474
 substances that inhibit, *Helianthus*, 13997
Avena, 13997
 of teak, means of improving, 17647
 and viability, carpet grass, 11957
 vitamin requirement, orchids, 6571
 of *Wolfiella*, 2886
 hard, storage conditions as affecting, legumes, 15726
 hormones, distr. in *Pyrus* and *Prunus*, 12072
 vernalization as affecting, cereals, 17681
 as influenced by cold, peach, 1242
 by high-frequency irradiation, *Hordeum*, 1384
 Seed (continued)
 of *Juniperus*, cyt. and development, 15523
 mutilation, effect on germination and growth, wheat, 15566
 number in apples, related to time of fruit drop, 13912
 onion, treatment for onion fly, 17882
 Paleozoic, development, 15431
 peanut, parasitic fungi on, 15799
 production by forest trees, Finland, 15644
 proper labeling, need with *Brassica* spp. in Calif., 1260
 protein extraction from, chemistry, 13837
 protochlorophyll in, pumpkin, 12036
 size, effect on seedling size, avocado, 15598
 relation to growth rate, corn and sorghum, 2921
 to pigments in seedlings, sunflower, 1403
 to polyploidy, 8926
 to size of plants, 10263
 sterility in *Ranunculus*, 6449
 storage, of carpet grass, factors affecting, 11957
 of *Cedrela mexicana*, effect on germination, 8518
 of elm, 6584
 of lettuce, 1369
 temp. as affecting, 13917
 viability retention during, 6533
 testing, by biochemical methods, 13937
 of forest tree seed, 8546
 pathological aspects, 1480
 relation of phototropism to provenience, 8937
 by sodium biselenite method, 12010
 statistical analysis, 17587
 transmission, of tobacco ringspot virus, 15833
 treatment with hormone dust, wheat, 12070
 viability, of buried rice seed, red vs. white, 15545
 of carpet grass, 11957
 catalase activity as index, 13998
 of cotton, 4825
 delinting as affecting, 13812
 of *Festuca rubra*, 10193
 of native grasses, Nebraska, 10783
 of oily, temp. as affecting, 1324
 storage conditions as affecting, legumes, 15726
 lettuce, 13917
 in storage, elm, 6584
 temp. and humidity as affecting, 6583
 onion, 8572
 ornamentals, 17692
 vegetables, 15586
 viability and germination, electrodiagnosis as affecting, pea, 17674
 water relations and changes in sugar content during drying, 10313
 x-radiation, 14013, 15751
 Seeder, for cereals in nursery, 11932
 Seedling. (See also *Seed*.)
 anatomy of *Leptidium*, 4813
 coleoptile, defined, 1165
 structure and formation, oats, 17705
 hypocotyl, anatomy in *Daucus*, 10167
 of pine, stomatal anomalies, 2911
 time of emergence, soil type as affecting, 2951
 Segmental interchange. (See *Chromosomes*; *Meiosis*.)
 Segmentation. (See *Cleavage*.)
 Segmentaria calathus, host for *Pharyngostomum*, 6802
 nitida, respiration, 14601
 Segregation, chromosomal. (See under *Meiosis*.)
 Selachii (Elasmobranchii), p.1878⁴
Selaginella abyssinica, in Rhodesia, 8423
Selaphorus (p.1881³) alleni, nesting habits and young of, 5193
Selaphorus alleni, nesting observations, 7000
 Selection. (See also *Animal breeding*; *Evolution*; *Livestock*; *Plant*.)
 forces in, *Paratettix*, 16196
 and inbreeding, effect on rate of attaining homozygosis, 7140
 and interrelations of inversions, heterosis and recombinations, 1736
 in mouse, for tail-spotting, 13461
 natural rôle in evolution, 14341
 statistical treatment, 10750
 problems, in sugar beet breeding, 1757
 in selfed lines, for good traits, maize, 16172

SUBJECT INDEX

Selenarctos-Serratia

- value of certain genes and combinations, *Drosophila*,3464
in Wensleydale sheep,1765
Selenarctos (p.1883²) *thibetanus mupinensis*,
autocool. in Thibet,5223
Selenate, Na, for insect control on cotton,
.....12200
Selenia (p.1865²), n. sp.,2885
Selenichthys (Pisces), p.1879⁴
Selenidium (p.1868⁴) *foliatum* (*Selenocystis*),
.....1577
Seleniidae (Protozoa), p.1863⁴
Selenium, absorption by wheat, S as
affecting,1409
availability to plants, index to and
forms compared,10197
dist. in Cretaceous formations of S.
Dakota,3508
effect on *Astragalus* spp.,1773
formations in western U. S. A., indicator
plants for,10776
plants indicating presence,10179
poisoning of livestock,15092
soils containing and plant associations,
U. S. A.,2925
solution in KNH_4S , as insecticidal
spray,3176
toxicity, As as affecting,12339
diet and rat,16812
a public health problem,14989
SELENOCYSTIS (Prot.) (p.1868⁴),1577
SELEVINIA (Mamm.) (p.1882²), *paradoxa*,
.....12442
SELEVINIIDAE (Mamm.) (p.1882²),12442
Self sterility. (See *Sterility*, self.)
Seligeraceae (Bryophyta), p.1863²
SELKIA (Algae) (p.1860⁴) *lacustris* in
fresh water,10105
Semasia (p.1877²) *diuturna*, damage to conifers,
Switzerland,15909
Sematophyllaceae (Bryophyta), p.1863⁴
Semboeng, infusion, pharm.,2303
Semele (p.1872⁴), n. sp.,6828
Semelidae (Mollusca), p.1872⁴
Semen, density of sperm suspension, fertility and,
fowl,13047
gelatinizing, artificial insemination and,
.....5975
identification by blood groups,17230
infectiousness in late syphilis,15312
production, in fowl,2508
technic for transporting, sheep,3467
vit. C in, guinea pig,16536
man,7489
Semicassis (p.1872²), n. sp.,6828
Semicircular canals. (See under *Vestibular apparatus*.)
Semi-desert. (See under *Desert*.)
Seminal fluid. (See *Semen*.)
Seminal vesicles, as influenced by:
adrenalectomy, castrated mice,12643
androgens and estrogens, ocular
transplants, rabbit,3868
estrone, mouse,12951
sex hormones, monkeys,16991
motility, sex hormones as affecting,
.....16622, 16623
seasonal variations, rat,7974
structure after castration related to
degree of development of adrenal x zone and age, mice,
.....15019
wt. and histology after vasectomy,15023
Semotilus, biology,10814
Senecio (p.1867⁴), n. sp.,4763
alkaloids from, chemistry,12038
South American spp.,6406
Seneciophylline, toxicity,13178
Senescence. (See also *Age*; *Longevity*.)
in aortic dissecting aneurism's medial
degeneration,14777
bacterial, mechanisms,17471
blood and metabolism studies in, man,
.....16443
causes and characters, man,3884
discussion,9072
new periodical,12498
pathologies in, dietary deficiencies and,
.....2049
plant, of phloem cells and tissue,15517
testosterone as affecting, rat,16613
Senftenbergia (p.1863⁴) *† ophiodermatica*,
redescr.,3372
pinnaeformis, fructifications (Cb),15430
Senility. (See *Senescence*.)
Senobasis (p.1877²), n. sp. (N),5150
Senoprosopis (p.1877²), n. sp. (N),5150
Sensation. (See also *Pain*; *Taste*; *Touch*;
etc.)
cortical response under deep anesthesia,
.....5692
cutaneous, axon potentials in response
to stimuli,7672
generalization with voluntary reactions,
.....5679
haptic, study,240
light, testing for, instruments and
technics,16393, 16394
methods and apparatus for study,234
.....237, 238, 239, 240
proprioceptive, in insects,5685, 5686
temperature, cold-mapping, part-whole
relations,16679
reliability,5495
stimulator size and,14706
evidence against Alrutz theory,2207
.....2208
responses after adrenalin,12643
warm-mapping, reliability,9461
theories, book,5687
vibratory, local anesthesia as affecting,
.....11131
Sense organs. (See also *Nerve*, endings;
and specific sense organs, e.g., *Ear*;
Eye; *Lateral line organs*; *Olfactory organs*.)
anatomy, book,13288
chemoreceptors, aortic, location and
function,13105
in *Nereis*,9451
poisons as affecting, *Musca*,5072
halters of diptera, morph. and physiol.,
.....12362
Jacobson's organ, development in bats,
.....13328
structure and function in snakes,15000
non-optical, bright and dark discrimination
by, *Xenopus*,13051
photoreceptors, pineal eye as, *Anolis*,
.....14701
physiology, single and double observations
in,9465
stim., thoraco-pneumographic variations
after,9464
Sensitivity to drugs. (See under *Drugs*.)
Sensitization. (See also *Allergy*; *Photo-sensitization*.)
to adrenalin, cat.,12945
of bacteria to biological action of light,
.....15420
cutaneous, by intranasal pollen instillation,
.....13439
in man vs. animals, gross and microscopic
changes,17141
passive, by sensitized-animal serum,11561
effect on duration of passive immunity,903
of enterococci, effect on phage absorption
by,8214
in guinea pig, to cotton lintens, and
house dust,9837
hypo-, by whole bee extract, to venoms
of bees, wasps and ants,15156
passive local, in abdominal organs of
monkey,924
to phthalic anhydride,13443
to pinene,805
of rabbits, blood marrow and blood
picture after,2427
in exptl. pulmonary tuberculosis,
primary lesion as affecting,2376
to heteroplastic transplants of thyroid
tissue,9671
by Seibert's tuberculo-protein derivative
modified,2592
by simple chemical compounds,873
.....4516, 11544
tissue allergy in perfused organs after,
.....4521
tuberculin, by heat-killed tubercle
bacilli, in children,17184
in skin testing,2562
veal, by synergic action of staphylo-
toxin,6076
Sepsal. (See *Flower*.)
Sepsia, physiological action in man,5774
Seipia officinalis, shell, composition and
medicinal properties,1321
Septicemia. (See also *Bacteremia*.)
bacterial content of spleen in,2538
blood stream u.v. irradiation as affecting,
.....9101
from dental wounds,13597
equine, sulfanilamide therapy,11720
hemorrhagic, *Pasteurella bovisseptica* in
bovine,6248
Pasteurella strains, comparisons,6315
preventive inoculations for, statistics,
.....8166
Klebsiella pneumoniae causing,6178
pneumococci, bilateral endophthalmitis
complicating,17312
immunization by type-III antisera,
.....13537
from poisoning by anaerobic bacillus
from sausage,13618
puerperal, sulfonamide therapy,4565
staphylococci, antitoxin therapy,13492
diagnosis and antitoxic therapy,4514
mortality, age as affecting,13492
review,16901
streptococci after a burn, sulfanilamide
vs. convalescent scarlatina serum as affecting,
.....9855
tularemia, meningitis and, path.,7863
Septifer (p.1872²), functional anatomy
bivalve,10560
Septis (p.1877²) *arctica*, ♂ genitalia,16042
SEPTOCHYTRIUM (Fungi) (p.1861²),
variable,17484
Septonema (p.1860³), association with
Mytilidion,11819
Septoria (p.1862⁴), tax.,8407, 15453
.....15464, 17487
apii, on celery, control,15380
no. of spores per pycnidium,15305
bromigena, studies on,3169
pisi, on peas, varietal susceptibility
tests,3169
Sequoia (p.1864²), characters, emb. hist.,
.....17511
of Italy (N),13721
Sequoiadendron segregated from,17511
gigantea, *Coniophora puteana* on,6631
morphology and embryogeny,6440
magnifica, at Yellowstone,13715†
sempervirens, embryogeny and phylogeny,
.....10163
SEQUIOIDENDRON (Gymnos.) (p.1864²),
giganteum (*Sequoia*),17511
Sericulture. (See also *Bombyx mori*; *Silk*;
Silkworm.)
cocoon, diam. as related to length,8675
mulberry stem utilization in,8678
Series, binomial, fitting for frequency
distr.,1814
Serine, 1-, effect on growth, (*Obelia*),9207
Serinus (p.1882⁴), (See also *Canary*.)
n. subsp. in, South-west Africa,7023
Sero diagnosis. (See also *Allergy*.)
of animal products,8135
of animal relationships, by precipitin
reaction,6066
of bird spp.,17202
of blood of animals,6117
in chronic infections,17326
of citrus scales,1482
clinical, manual,17357
of epidemic influenza, in ferrets,621
of human races,2535, 11568
in infectious mononucleosis,2395
inverse anaphylaxis applied to,4526
of malaria, buffer precipitation test,
.....14194
protein-tyrosin reaction,6753
non-specificity, in hydatid disease,14168
relation of encephalitis to equine
encephalomyelitis,618
of smut fungi,2797
of syphilis, coaguloreaction,866
clotting reaction, Hirschfeld-Klinger
mechanism,2520
Serological reactions, of bacteria, pH of
media as affecting,923
diet, fasting and thirst therapy as affecting,
.....8148
Serology, animals relationships studied
by,4515, 6117
antigenic relationships of pollens shown
by,15142
in bacterial classification,2767
of *Drosophila* spp.,18003
application to taxonomy, 1620, 6893
extracts of *Leishmania*, prepn.,5085
of liposarcoma, guinea-pig,5806
products, biological assay, standardization,
.....6069
specificity, peptides and,11543
Serotherapy, chemotherapy and,15190
in infections in children,15198
of pneumococci pneumonia types,
.....15201
preoperative, in appendicitis and peritonitis,
.....4527
Serous membranes. (See also specific
serous membranes, e.g., *Peritoneum*,
Pleura.)
effusions, tumors and,5812
friction, in production of sounds,13130
Serozyme. (See *Thrombin*, pro-.)
Serpentes (Rept.) p.1880⁴, (See *Snakes*.)
Serpicoidea (Hymenoptera), p.1878²
Serpula (p.1871³) *wurgauensis*, from
Bavaria, Jurassic,15943
Serpulidae (Annelida), p.1871³
Serratia marcescens. (See also *Bacillus prodigiosus*.)
proteinas,15424
senescent phase of aging cultures,
mechanisms,17471

- Serratospiculum* (p.1870*) *amaculata*, from *Falco*,17960
- Sertoli cells. (See *Spermatogenesis*.)
- Sertularidae (p.1869*), structure, distr., and life history,12608
- Serum. (See also *Antiserum*; *Blood serum*; *Serology*.)
- linkage with thorium B, selective deposition, mice,4189
- liquefaction of coagulated, by *Beauveria* spp.,970
- metabolism of bone marrow in,12643
- spreading factor in,8105
- Sestonosis, antigen,4526
- iritis and,16907
- isoagglutinin titers,7877
- polyneuritis form, incidence and therapy,17126
- after rabbit vs. horse antipneumococcus serum,5820
- removal of factor causing,17185
- urticarial cases,6111
- Sesarma intermedia*, *Paragonimus* in, 17941
- Sestonosis, gill irritation in trout, 6254
- Setaria* (p.1864*) n. spp.,2828, 8426
- anomalous inflorescences,17514
- biology, distr., and culture in Germany,6484
- chromosome numbers,1703
- photoperiodism in,12080
- geniculata*, presence in Italy,13743
- SETIGERELLA (Brach.) (p.1871*), new subgenus of *Prodictus*,8292
- Seven day fever. (See *Leptospira hebdomadis*.)
- Severin, Guillaume, biography,8887
- Sewage, disposal, bacterial beds, enchytraeid worms as affecting,6217
- degassing tanks, trichlorethylene in,15305
- lake water self purification from, 17362
- new planktonic alga in,4732
- organisms of Laidlow and Elford, bile salts as affecting,9954
- purification, by activated sludges, 8304
- load variations as affecting, 15331
- factors in,15331
- sanitary analysis, media for,11796
- sulphate-reducing bacteria from, 6320
- Sex, amphitypy, in lacet fluke,14183
- in Angiosperms, physiological aspects,6558
- of asparagus flowers, age as affecting,13920
- behavior, factors affecting, guinea pig,7604
- homosexuality in night heron, 7019
- hysterectomy as affecting,9412
- technic for study, rat,2172
- thymocrescin as affecting, rat, 9284
- in birds, book,1643
- characters, androgens and estrogens as affecting,5620, 5673
- of *Chlamydomonas* gametes, light as affecting,10805
- chromosomes. (See under *Chromosomes*.)
- cycle. (See also *Estrus*.)
- in female frog,7973
- as influenced by:
- brain lesions, guinea pig,18084
- environment, *Fundulus*,12622
-12630
- factors, *Xenopus*, 8954, 8956, 8957
- hypophysectomy, *Bufo*,18045
- light, greenfinch,11111
- raccoon,8958
- sparrow,5674
- determination, action of genes in, discussion,10725
- in *Carica papaya*,5815
- genes for,10728
- in chicks, color markings as index,15123, 15124
- chromosomal, sex hormones as affecting,4986
- intersexuality and, *Drosophila virilis*,94
- mechanism, *Drosophila miranda*,7150
- in *Melandrium*,16191
- in *Pteromalus* and *Habrobracon*, 8950
- in *Rhabdias julleborni*,1718
- in *Setaria*, review,5298
- development, pineal extracts as affecting,3818
- sex hormones as affecting, opossum,9349
- differences, in available body fluid, man,8634
- in birth weights, man,18190
- in blood histamine, rat,256
- in body growth of infants,725
- in body wt. cycles, mice,10995
- in calcification of cartilage, man,2252
- in cancer of dorsum of hand,9597
- Sex (continued)
- differences (continued)
- in cancer incidence,9583, 9585
-13214, 13222
- in capillary filtration rate,2231
- in cardiovascular syphilis,11208
- in coronary occlusion,475, 16733
- in hemiplegics,13108
- in crop-sac response to prolactin, pigeon,16589
- in dental caries, rat,14555
- in effect of ant. pituitary on liver fat, mice,3797
- of exercise on liver fat,7522
- of gelatin on fatigue,7693
- of gonadectomy and ant. pituitary extract action on cartilage,9873
- of hormones, on tumors,5808
- of progesterone on adrenalectomized cats,12943
- of vits. B₁ and B₂ on body wt. in hyperthyroidism,2060
- in food intake needed to gain wt.,9193
- in gonadotrophic activity of pituitary, rat,3794
- growth, in body wt., infants,4177
-5796
- of well children,564
- in growth rate, mice,14556
- in heart size, detn.,5712
- in hormone content of pituitary, rabbit,9369
- in pH of skin surface,10834
- in incidence of aleuemic leucemia,13259
- of bone tumors, mice,601
- of carcinoma, India,7844
- of coronary artery disease,4068
- of coronary sclerosis,11167
- of diabetic retinitis,5856
- of esophageal cancer,13199
- of genital tuberculosis,13244
- of helminthiasis, Venezuela, 10511
- of hereditary hypochromic anemia,13258
- of hydrocarbon induced tumors, mice,14877
- of intestinal neoplasms,14881
- of liver and lung tumors, mice,16330
- of mixed renal tumors,11287
- of multiple tumors in a sarcoma stain of mice,602
- of pituitary adenomata, rats,614
- of rheumatic disease,5795
- of skin cancers,13227
- of tumors, diet and,16465
- Jewish race,9599
- mouse,13215
- in isoagglutinin titers,7877
- in leucocyte counts in children, 16822
- in mortality rates, in rural areas,2678
- in nutrition, S. African children, 9580
- in olfactory reactions of *Drosophila*,443
- in pelvis, man,2452
- in pigment distr. in skin,15030
- in postural sway, man,8021
- in rate of digestion of starch, rat,12875
- in reaction to venereal lymphogranuloma,16894
- in red cell fragility, in tropical anemia,7878
- in regional anatomy of inferior and superior lumbar spaces, 8010
- in resistance to anoxemia,7528
- to cortin, rat,9321
- in response to castration, rats, 3801
- to temp. changes, *Zabrotes*,14386
- in sedimentation rate, guinea pig,11324
- in sensitivity to nicotine, fish,9565
- in size of fore and hind limbs, guinea pigs,9678
- in surface tension of urine,9398
- in thymus involution, guinea pig,3788
- in thyroids of guinea pigs and rats,9697
- in thyrotrophic hormone in pituitary, rat,14648
- in tuberculosis mortality,980
- differentiation, of genetic ♀♀, prenatal adm. of testosterone as affecting, mice,16989
- as influenced by:
- stilbestrol and estrogen,5667A
-12955
-11409
- sex hormones, *Amblystoma*,4336
- amphibians,5900
- Sex (continued)
- differentiation (continued)
- as influenced by (continued)
- synthetic ♂ hormone, chick,759
- testis extracts, opossum,11407
-11408
- in mammalian embryo,15079
- in *Paramecium*,10523
- in visceral organs, fowl,4423
- in *Forticella microstoma*,11099
- dimorphism, in down and adult plumage, goose,7153
- in plumage of domestic fowl, review,5341
- dioecism, in *Simmondsia californica*,1327
- environmental control in Hymenoptera,14267
- in fungi, hormones allegedly concerned in peritheciom formation,2810
- glands. (See *Gonad*; *Ovary*; *Testis*; and specific accessory glands.)
- heteroecism, of rusts, loss in Arctic,8396
- heterothallism, segregation of sex factors in *Ascombolus*,17485
- of *Sphacelotheca cruenta*,3113
- vegetative differences between + and - strains of molds,8388
- hormones, animal. (In the main this material is indexed as hormones and extracts of the organ from which they are derived, e.g., *Gonads*, *Ovary*, *Pituitary body*, *Placenta*, *Testis*; or under processes influenced by them, e.g., *Estrus*, *Menstruation*, *Ovulation*, etc. See also *Transplantation*; etc.)
- plant. (See *Hormones*, plant.)
- inheritance, in *Chlamydomonas* and related spp.,79
- of new form, hermaphrodite in *Cucumis*,5326
- intergrades. (See also *Gynandromorphism*; *Hermaphroditism*; *Sex reversal*.)
- biological basis,14616
- in dioecious maize,12531
- produced by diethylstilbestrol, rat,12855
- by estradiol, mouse, 13043, 13044
- by estrogen, rats,14680
- sex detn. and, *Drosophila virilis*,94
- inversion, induced by sex hormones in frog larvae,16982
- life, effect on resistance to barbiturates,13178
- linkage. (See *Linkage*.)
- male sex hormones as affecting ♀♀,5551
- masculinization of ♀ rat by gonadotrophin,12643, 12934
- mating types in *Paramecium*, 3262, 3269
- maturity, age, and genetic constitution, rat,10734
- blood phosphatase in,16439
- egg weight on, wheat bran in diet as affecting,15126
- induction of premature by testosterone, boys,384
- inheritance of time, turkey,14366
- in obese children,16819
- modifications in embryo by estrogen adm. to pregnant rat,12643
- organs, animal. (See *Genitalia*; *Gonads*; and specific organs.)
- plant. (See *Embryo sac*; *Gametophyte*; *Pollen*.)
- periodicity. (See *Sex*, cycle; *Estrus*; *Menstruation*.)
- physiology, review,13033
- precocity, pseudo-adrenal cortical tumor and,5860
- in prognosis of Hodgkin's disease,16848
- ratio, in international hermaphroditic oysters,3296
- in *Baeus latrodeci*,5069
- in cattle,16628
- age and season as affecting,8091
- host as affecting, parasitic hymenoptera,8668
- in mules and other hybrid mammals,3465
- in parthenogenesis,17044
- in pheasants, Michigan,5417
- in pilchards of Pacific coast of N. A.,9062
- pre- and postnatal, sheep,9421
- protein alimentation as affecting, rat,7589
- in *Schizothotus*,10447
- in whitefish in Lake Huron,9061
- in wild birds,10642

SUBJECT INDEX

Sex-Shock

Sex (continued)

- receptivity, hormones as affecting, monkey,9413
- reversal. (See also *Gynandromorphism*; *Hermaphroditism*; *Sex*, *intergrades*.)
- in adreno-genital syndrome,651
- in *Amblystoma*,749
- factors affecting, in *Limacina* (Mollusc),10559
- in plants,6558
- skin, nature of edema,3790
- swelling during pregnancy, orange-utan,3976
- Sexava* spp., control of, New Guinea, 8635
- studies on,17857
- tanglefoot banding for, coconut, 5017
- Shade, effect on:
 - growth and leaf bud formation, peach,1255
 - tomatoes,13905
 - vegetables,13914
- Shade tree(s). (See *Trees*.)
- Shannonomyia* (p.1877?), n. sp.,14251
- Shark(s). (See also *Elasmobranchii*.)
- anatomy, guide book,16954A
- liver oil, as vit. A source for poultry,17109
- (Paleozoic). (See *Helicoprion*.)
- succession of teeth,12418
- weight, calculation,5248
- Shedding. (See *Abscission*.)
- Sheep. (See also *Meat*; *Ovis*; *Wool*.)
- abortion in, *Spirillum ovis* associated,11721
- adenomatosis, lungworms and,17918
- anomalous ♂ lamb,761
- artificial insemination,3467, 5985
- Ascaris* in bile duct,1566
- Babesiella* in,8719
- blood, hemolytic principle in, demonstration and properties,13445
- studies during pregnancy, 7575, 7576
- blood groups,13516, 13517
- relations,2595
- blood sugar and ketones after labor,5511
- botulism in, cause and premunition in Australia,6224
- pica-associated, blood and urine comp. in,15388
- toxoid vaccination,6120
- breed, distr. and description,11480
- Co-deficiency disease in,17385
- coccidioidomycosis in man and, pathogenesis of initial acute stage,6204
- coccidiosis in. (See under *Coccidiosis*.)
- diseases, nutritional,2697
- epizootic pulmonary adenomatosis, relation to verminous pneumonia and jaagsiekte,17386
- erythrocytes, A-factor in,934
- ethmoid bone, adenocarcinoma, origin,13217
- exptl. *Dicrocoelium* infection in,14183
- feeds for, amides and urea in, N balance and,5999
- ammonium salts as,11488
- effect on ketonemia in pregnant,3698
- fetal, behavior development,11115
- Oe consumption,10962
- glandular tissue, elements in,13315
- (*Gongylonema* in, U. S.,17907
- heartwater disease. (See *Heartwater* *disease*.)
- helminths, viability on pasture,12244
- hemolysis, and agglutinin titers in human sera,13519
- demonstration of group-specific,13517
- herd improvement,11475
- hog cholera virus transferred through,2699
- as host to *Schistosoma spindale*,1544
- immunity of newborn, transfer via colostrum vs. placenta,3905
-9907
- inheritance of fleece types,7147
- John's disease in, general account,11745
- Karakul, pelts, tanned vs. untanned,5980
- pure and crossbred,5987
- in Southwest Africa,5993
- types of curl on pelts,5986
- lambs, deficiency disease of newborn,8328
- dysentery of new born,6241
- feeds for, calcium plus sorghum roughage,11482
- hay, effect on protein in ration,5996
- nicotinic acid requirement,9232

- O₂ saturation of blood during birth,8615
- parasite susceptibility, nutrition as affecting,6728
- sheared vs. unsheared, gains,5982
- time of closure of foramen ovale, 476
- linguistosis incidence,8695
- Listerella ovis* infection in,11724
- encephalomyelitis or encephalitis associated,11736
- louping ill in. (See *Louping ill*.)
- metabolism, detn., for 48 hr. period, apparatus and technic,3782
- of gaseous metabolic products, apparatus,3783
- milk, serological identification,8134
- Moniezia* infestation from pasture, 1569
- mountain, habits in Yellowstone Park,5220
- multiple births in,17079
- myiatic wounds, pH,3200
- nematode in, development of resistance,14159
- parasites, and control, Sweden,5091
- paratuberculosis,6229
- paratyphoid spread by rats,2709
- patent ductus arteriosus and foramen ovale in,17054
- pica in, incidence and control,15388
- plants poisonous to,2697
- pre- and postnatal sex ratio,9421
- preventive inoculations, statistics, 8166
- protection from maggot fly,6703
- protein requirement,16484
- pyogenic infections in,15358
- retina, Cs content,5920
- rinderpest in, immunization by goat-tissue virus,17236
- Rocky Mountain bighorn, verminous pneumonia in,4678
- scab (virus), inoculation to donkey,956
- serum, colostrum substitute,2485
- stomach worms, CuSO₄ treatment as affecting,6717
- in syndesmochorialis group of placentas,9905
- tapeworm, extract, toxicity,14179
- trichostrongylosis in,14158
- Trypanosoma evansi* in,12259
- Trypanosoma rhodesiense* infection in,15954
- trypanosomiasis, surfen-C therapy, 6155
- tuberculosis in,15355
- in Turkey, discussion,11489
- Wensleydale, color, fertility and intensity of selection,1765
- Sheep pox. (See *Varitola ovina*.)
- Shell(s), egg. (See under *Egg*.)
- molluscan. (See under *Mollusca*.)
- Shellac. (See *Lac*.)
- Shellfish. (See especially under *Crabs*; *Lobsters*; *Oysters*; etc.)
- water producing, sanitary analysis, 996
- Shelterbelt(s), success in Minnesota,17650
- Shigella* (p.1861?), antigens, purification,17183
- antigenic and cultural comparisons,8355
- bacteriophage therapy of infections by spp.,4590
- biological characters of strains from same case,17301
- chronic ulcerative colitis and,13613
- classification of strains from epidemic infantile dysentery,13611
- culture media for,17364
- dissociation in,13611
- dysentery-associated forms, review,8237
- glucido-lipidic antigens of paratyphoid strains vs.,803
- growth regulators for,4714
- incidence in acute diarrhea of childhood,17364
- phage activity in lysogenic cultures effaced,8200
- from urine, strains compared,9974
- in urogenital tract infections,15263
- alkalescens. (See also *Bacterium a*.)
- agglutinins, in sera of normals vs. various infections,6084
- serological differentiation from *S. paradysenteriae* strains,2563
- subspecies from urine,9974
- dysenteriae*. (See also *Bacillus d.*; *Dysentery bacilli*; *Diarrhea*; *Dysentery*; *Pseudodysentery*.)
- accidental laboratory infection by,17322
- agglutiny relation to *Escherichia coli*,845
- agglutinin absorption between *Escherichia coli* and,2551

Shigella (continued)

- dysenteriae* (continued)
- antisera, effect on endo- and exotoxins,841
- titration by standard mouse vs. flocculation methods, 13434
- antitoxins, specific in infections by,925
- titration, flocculation vs. neutralization,4463
- bacteriophage, aging as affecting,13571
- in diarrhea outbreak,2645
- differential media for,8294
- endotoxin, serodiagnosis and properties,841
- exp. fever induced by, inhibition by minimal amounts of heterobacteria,9378
- sulfanilamide therapy of infections by,4567
- toxin,8154
- gallinarum*. (See also *Bacillus typhi gallinarum*; *Salmonella g.*; *Fowl typhoid*.)
- paradysenteriae*. (See also *Bacillus dysenteriae*; *Shigella dysenteriae*; *Diarrhea*; *Dysentery*.)
- agglutinin absorption between *Escherichia coli* and,2551
- antisera, effect on endo- and exotoxins,841
- antitoxin, titration, flocculation vs. neutralization,4463
- dysentery in monkeys due to,965
- endotoxins, isolation from J-Schmitz strains and comparisons, 6054
- serodiagnosis and properties,841
- Kruse-Sonne var., endotoxin in S strain, properties,4456
- non-agglutinating capsulated strains,13468
- prophylaxis against, by sera and vaccines,2532
- serological differentiation of strains from *S. atalecensis*,12563
- serological identification of cultures,17333
- strains from epidemic infantile dysentery,13611
- var. Hiss and Russell, dysentery epidemic in children due to,17378
- var. sonnet, bacteriophage therapy of infection by,4590
- Watanabe strain, serological comparisons,2559
- sonnei*. (See also *Bacillus dysenteriae*; *Diarrhea*; *Dysentery*.)
- antigenic and cultural properties of strains,8355
- Shiner. (See *Notropis cornutus chrysocephalus*.)
- Shingles. (See *Herpes zoster*.)
- Ship(s), quarantine and fumigation for diseases brought in by,10013
- role in distr. of tourist ants,16250
- Shipley, Arthur E., portrait,7075
- Shipworm. (See *Teredo* and other genera.)
- Shock. (See also *Allergy*.)
- anoxic and insulin, symptoms and anat. changes,4299
- ascitic fluid transfusion in,7339
- blood pH change due to,12755
- blood redistrib. in dog,9145
- blood volume in,12643
- in bone fractures, etiology,13103
- cardiazol, in schizophrenia, electrocardiogram,14774
- decerebrate, action of sympathomimetic amines after,11212
- exptl., intra-arterial saline as affecting,4081
- hemorrhagic, use of dried ascitic fluid in,12643
- histamine and peptone, plasma loss, rôle of liver in,16417
- hypoglycemic, factors affecting,7430
- insulin, cerebral metabolism and potentials,7910, 7911
- effect on:
 - cardiovascular system,9526
 - cerebrospinal fluid, in schizophrenia,7917
 - heart,11227
 - in schizophrenia, electrocardiogram,16722
 - surface tension of serum and, 7916
 - in intestinal distention, mechanism and therapy,13100
 - like reaction produced by irradiation of abdomen, rat,5475
 - resistance of rats to,9896
 - menstrual, mechanism,13435

- Shock (*continued*)
 peptone, effect on plasma and erythrocyte histamine content, . . . 5514
 postoperative enterocolitis and, . . . 14582
 postoperative ulceration of digestive tract and, . . . 14583
 phenol, pressor action of sympathomimetic amines in, . . . 11259
 resistance to, non-specific factors in, . . . 6071
 spinal, cord potentials in, . . . 12643
 therapy, in ophthalmic diseases, 13432
 in thrombophlebitis of adrenal veins, . . . 13099
 tissue asphyxia and, . . . 9140
 traumatic vs. anaphylactic, . . . 17182
 "warming time" in, factors affecting, . . . 6072
- Shoot(s). (See also *Root; Stem*)
 anatomy, and adventitious formation in *Lepidium*, . . . 4813
 of primordium, in apple, . . . 11928
 apex, of seed plants, review, . . . 17557
 apical dominance, apples, . . . 15783
 morphology and phyllotaxy in *Calluna*, . . . 2909
- Shorea*, wood rot of, in Philippines, 17851
robusta, crown ratio as guide to spacing, . . . 10277
 inflorescence, . . . 10237
 seedling growth on grassy areas vs. in forests, . . . 12001
teymanniana, volume table, . . . 1294
- Shortening, commercial, firmness measured by penetrometer, . . . 6259
- Shoulder, anatomy in moles, . . . 4310
- Shrews, bionomics, . . . 16111
 dentition in, . . . 5233
 dermal glands, . . . 4944
 ecology, . . . 5239
 feeding habits, . . . 5222
- Shrimps. (See also *Shellfish*)
 fresh water, encysted metacercariae in, . . . 1595
 of Gulf of Maine, survey, . . . 12620
- Shrubs. (See also *Dendrology; Trees*)
 distr. in Austria, . . . 12012
 hardy, for Michigan, . . . 1286
 of Iowa, environmental factors as affecting, . . . 3500
 of Kansas, list, . . . 1150
 ornamental, card file, . . . 3506
Suaeda on, California, . . . 15898
 wind-hardy and, for England, 10214
- Shwartzman phenomenon, chemical nature of active factors, . . . 6051
 effect on histamine in tissue, . . . 13472
 inhibition by antigen-antibody reaction, . . . 4493
 by Shwartzman filtrate, . . . 4493
 by intra-medullary tibial cavity injection of dysentery culture filtrate, . . . 13416
 by normal horse serum, . . . 797
 by pollen antigen-antibody complex, 796
 vit. C as affecting, . . . 13464
- Sialia* (p.1882²), food habits, . . . 9064
Sideranthus (p.1867⁴), selenium-tolerant spp., . . . 10179
 transf. to *Aplopappus*, . . . 13751
- Sideritis* (p.1867¹), n. sp., . . . 8444
Siderocapsa major, distribution in lakes and streams, . . . 2764
treubii, distribution in lakes and streams, . . . 2764
- Sididae (Crustacea), p.1878¹
- Sieve tubes. (See *Phloem; Vascular system*)
- Sigara* (p.1875⁴) *carinata*, association of non-homologous chromosomes, 1731
striata, abnormality, . . . 6911
- SIGEGALTA (Lep.) (p.1877⁵), n. spp. on cactus, . . . 8792
- Sigillariaceae (Pteridophyta), p.1863⁴
- Silage. (See also *Feeds*)
 A.I.V. method of preserving green, . . . 13689
 acid required by red clover or alfalfa, . . . 5991
 acidifying bacteria in, . . . 1028
 alfalfa, A.I.V. vs. molasses, as dairy cattle feed, . . . 17068
 neutralized before fed, . . . 5997
 carotene vs. vit. A, potency in, 15106
 chemical analyses correlated with microbial activity and numbers in, . . . 1022
 chem. composition of all types, . . . 6001
 combinations in dairy cattle rations, . . . 8089
 corn, NH_4HCO_3 treated vs. non-treated, effect on milk yield, . . . 17087
 corn vs. alfalfa, . . . 17068
- effect on acetoneuria in cattle, . . . 4412
 on milk production, . . . 772
 fermentation processes in, relation to stability, . . . 4688
 from grapevines, . . . 6264
 grass, legume and, methods of curing, . . . 13352
 review, . . . 17067
 thermophilous lactic fermentation, . . . 6262
 value, criteria, . . . 13350
 green, fermentative processes in, . . . 1029
 legume, in temporary silos, . . . 6005
 lupine, comparison of kinds, . . . 5988
 potato and sugar beet, as pig feed, . . . 11485
 protein-rich crops + mineral acids in, chem. and bacteriol. study, . . . 17398
 sorghum, for beef cattle, . . . 777
 spoilage, pH and microbiological relations, . . . 4688
 sweet lupine, as livestock feed, . . . 5983
- Silene* (p.1865⁹), spp. genetical investigations, . . . 10139, 10140
 . . . 10141, 10142, 10143
fimbriata, a chimera, . . . 12528
- Silica, content of Wisconsin lakes, . . . 7231
 effect on lungs, . . . 11868
 in production of congestive splenomegaly, dogs, . . . 9614
 solubility in ascitic fluid, . . . 5507
- Silicate(s), effect on crop growth and anion displacement in soils, . . . 4864
 as fertilizer for oats, effect on P content, . . . 15529
 negative chemotropism of leucocytes to, rabbits, . . . 5819
 rôle in cataract production, . . . 12643
 solubilities, . . . 4301
- Silicic acid, in Boraginaceae, . . . 1334
 medium, for water and sewage, analysis, . . . 11796
- Silicicoles, pH range of weeds, . . . 16260
- Silicon, in grasses, variations in, . . . 11487
 in wool, relation to diet, . . . 11487
- Silicon dioxide. (See *Silica*)
- Silicosis, basophilic erythrocytes, vs. Pb exposure, . . . 5875
 blood supply in lungs in, . . . 615
 effect on respiratory adaptation to acute anoxia, . . . 2423
 in metal grinders, sandstone and, 9667
 nature of mineral particles in sputum and ash of lungs, . . . 2420
 path. of organs and, . . . 7924
 potter's, findings, . . . 11364
 prevention by aluminum, rabbits, 5870
 radium mining as affecting, . . . 7848
 relation to tuberculosis incidence, . . . 11369
 in miners, . . . 13276
 of spleen, path., . . . 14984
 uncomplicated case, study, . . . 2422
- Silk. (See also *Sericulture; Silkworm*)
 amino acid content, . . . 3221
 hypersensitivity to, . . . 15129
 tussa, wild, amino acid content and chem. constituents, . . . 3221
- Silkworm(s). (See also *Bombyx mori; Sericulture; Silk*)
Crossosoma sericariae on, control, 3232
 development, electric grounding as affecting, . . . 8096
 fiber, size and shape from one larval gland, . . . 3227
 foods, . . . 3222
 mulberry leaves as, . . . 3000, 3216
 sex and nutritive quality, . . . 3217
 testing method, . . . 3228
 pebrine. (See also *Nosema bombycis*)
 larval infection, . . . 3226
 recognition in moth, . . . 3220
 polyhedral bodies in, behavior during metamorphosis, . . . 3230
 pupae, vit. B₂ in, . . . 16517
 races, recognition by egg, . . . 3219
- Silver, foil, effect on bacterial growth, . . . 4664
 as hydrogen bisulphide indicator, . . . 4664
 impregnation, in study of senile psychotic path. changes, . . . 16939
 iodate, tests for purity, . . . 8598
 nitrate, in electrokatadyn disinfection method, . . . 2674
 in sterilization of T.A.B.O. vaccine, . . . 17190
 protein preparations, use in staining, . . . 5258
 salvarsan, in trichinosis therapy, . . . 8713
- Silverfish. (See also *Leptisma saacharina*)
 gregarines in, . . . 12287
- Silviculture. (See also *Forests; Forestry*; and especially under common or scientific names of forest species.)
 conversion of coppice to broadleaf high forest, . . . 10234
 of hardwoods to softwoods in New England, . . . 13956
 cutting methods for northern hardwoods, . . . 10242
 in Finland, . . . 6534
 for forest-fire control, . . . 4898
 in German pine forests, . . . 15682
 "light cutting," effect on yields, 13967
 in Malaya, . . . 13957
 of Norway spruce, . . . 3018
 on peat and heath soils, Great Britain, . . . 4889
 of second-growth woods in Indiana, . . . 13964
 selection system, . . . 1292, 15676
 in relation to site, . . . 8550
 soil types as affecting, . . . 4890
 in S. Africa, . . . 4892
 thinning, effect on timber yield, 10253
 practice in Rumania, . . . 10239
 of spruce, . . . 13955
 in young hardwood stands in Pennsylvania, . . . 13950
- Simarubaceae (Dicotyledones), p.1866¹
- Simia* (p.1882²) *satyrus*, craniomandibular muscles, anatomy, . . . 8007
- Simmond's disease, vs. pituitary fibrosis without cachexia, . . . 5853
 semeiology, case reports, . . . 2405
- Simmondsia californica*, dioecious nature of, . . . 1327
- Simocephalus*, spp., planktonic in tropics, . . . 12319A
- Simodactylus* (p.1876²), n. sp., . . . 8766
- Simuliidae (Diptera), p.1877²
- Simulium* (p.1877²), spp. food of minnow, parasites of, Canada, . . . 15930
damnosum, as vector of onchocerciasis, Nyasaland, . . . 6730
haematopotum, as vector of pinta, 11633
ochraceum, as vector of pinta, . . . 11633
ornatum, pupation, . . . 12864
- Sinapis alba*, viability of seed, high temp. as affecting, . . . 1324
arvensis, in Germany, . . . 2869A
- Singa nitidula*, ecology, . . . 6864
- Simodactylomys* (p.1875³), n. spp., . . . 6843
- SINOSILLUS (Hem.) (p.1875⁵) *pliferus*, . . . 6913
- Sinoxylon* (p.1876³), of Indo-Malay, . . . 6879
- Sinum* (p.1872²), n. sp., . . . 6828
- Sinus(es), *Actinomyces* spp. from pus, 9975
 caroticeus. (See *Carotid sinus*)
 frontal, development in anthropoids, significance, . . . 9717
 in Neanderthals, . . . 5932
 tract, pus and emulsions from, effect on antigens and antibodies, . . . 17151
- Sinusitis, feline, etiology, . . . 2646
 nasal, path., . . . 5823
 paranasal, path. and symptoms, . . . 9605
 in turkeys, and therapy, . . . 2702
- Sipalia* (p.1876¹), synoptic table of French spp., . . . 3325
- Siparuna* (p.1865⁵), n. sp., . . . 2865
- Sipha flava*, as vector, of sugarcane mosaic, . . . 15832
- Siphonales (Algae), p.1860²
- Siphonaptera (p.1878³), (See also *Fleas*)
- Siphonocladales (Algae), p.1860²
- Siphonophores, nematocysts, England, . . . 3278
- Sipunculoidea, p.1871¹
- Siren lacertina*, helminths, . . . 6716
- Sirenoides (Pisces), p.1879¹
- Sirex* (p.1878⁴), bionomics, and parasites, . . . 15926
- Siricidae (Hymenoptera), p.1878³
- Siricoidea (Hymenoptera), p.1878¹
- Sisal (See *Agave*)
- Sitanion hystris*, susceptible to Hessian fly, . . . 17872
- Sitiphys* (p.1876³) *ammodites*, . . . 12352
- Sitona* (p.1876³) *lineatus*, on beans, life history, Sicily, . . . 5044
- Sitophilus*. (See *Calandra*)
- Sitosterol(s). (See *Sterols, plant*)
- Sitta* (p.1881⁴) *carolinensis*, pairing, duration of, . . . 7021
oberholseri, . . . 1642
magna, from Yunnan, . . . 5172
- Sittidae (Aves), p.1881⁴
- Situs inversus viscerum. (See under *Viscera*)
- Sivatherium* (p.1883⁴), sp., from Siwalik, . . . 10665
- Size. (See *Body size; Cell size*)
- Skate(s). (See *Raja*)

- Skeleton.** (See also *Man, skeletal remains*; and under parts of the endoskeleton composed of more than one bone, e.g., *Girdles, Skull, Vertebral column*, etc.; and the various headings under *Visceral*. For individual bones, e.g., humerus, tibia, see under *Bone*.)
- of *Acanthocybium solandri*, phylogenetic relations, 6954
 - development in fowl, sunlight as affecting, 6020
 - diseases of equine, nutritional relations, 15365
 - factors controlling, review, 16600
 - hypophysectomy as affecting, dogs, 3810
- Skiaigraphy.** (See *X-ray, photography*.)
- Skimmia laureola*, alkaloid from leaves, 1320
- Skimminianine**, from *Skimmia*, isolation and properties, 1320
- Skin.** (See also *Dermatitis; Dermatoglyphics; Dermatoses; Epidermis*.)
- in acrocyanosis, children, 11263
 - alkalization powers of human, 2548
 - allergic reactions, u.-v. light as affecting, 795
 - amphibian, growth of transplants, in vivo and in vitro, 11450
 - bacteriology of normal, 997
 - blood flow, in capillaries, 477
 - metabolism and water loss, temp. as affecting, 4056
 - nervous control, adrenalin and, 16732
 - bromide excretion, 3942
 - burns by HF, effects, therapy, 11360
 - carcinoma, continued trauma and, rabbits, 13218, 13219
 - frequency in United States Navy, 4216
 - location and therapy, 4195
 - production, mice, 11288
 - relation to sunlight, 4210
 - sites, statistical study, 13227
 - changes, in diagnosis of avitaminosis A, 14953
 - in scleroderma, tissue pressure and, 4095
 - cholesterol, increase after u.-v. irradiation, colored filters as affecting, 8571
 - in irradiated rats, 1290
 - cold-mapping, part-whole relations, 16679
 - color, physiological genetics, guinea pig, 14373
 - dehydrogenase, inhibition by u.-v. rays, rabbit, 3562
 - disinfectant action of scrubbing, 997
 - disinfection, 2632
 - distensibility, detn., 241
 - electric potential in wound healing, 200
 - electrolyte loss through, during artificial fever, 5657
 - electrophoresis of biologically active materials into, 10833
 - effect on absorption of epinephrin through, 14783
 - epidermal structures, amino-acid comp., 7977
 - Zn content, 7978
 - epidermis, mitotic rate in larval amphibians, 2472
 - erythema. (See *Erythema*.)
 - extracts, effect on anaphylactic shock, 2539
 - of frog. (See *Frog, skin*.)
 - galvanic response, adaptation, 2239
 - genital, of horse, innervation, 11395
 - grafts, autogenous pigmented, to defective white skin areas, 14996
 - on chorio-allantois of chick, 698
 - between hairless and haired rats, 9699
 - into lymph spaces, migration of epidermal cells in relation to surface polarity, 11419
 - heat regulating reflexes, 16317
 - homotransplantation, 9673
 - pH of surface, 10834, 10862
 - hypersensitivity. (See *Hypersensitivity*.)
 - impedance, in mental disease, 9665
 - infections, stain technic for organisms, as influenced by:
 - atmospheric dusts, mice, 16843
 - light, heat, x-rays and thorium X, 3578
 - staphylococcus toxin, inflammation and, 13239
 - temp., mice, 14694
 - injury due to tar oil insecticides, 12180
 - intradermal tests, in chronic infections, comparisons, 11653
- Skin (continued)**
- intradermo-reaction, to toxins, 6104
 - of Karakul sheep, tanned vs. untanned, 5980
 - lesions, in acute disseminated lupus erythematosus, 9613
 - due to canine leishmaniasis, 12250
 - thyroid feeding as affecting, 14654
 - living, pigments and color, 15030
 - local immunity to toxins in, 6104
 - local lipid atrophy and dystrophy due to insulin, 14955
 - mitotic rate, colchicine as affecting, 16994
 - necrosis by staphylococci toxin as influenced by heat, 4501
 - by saline, 4502
 - nerve endings, development in man, 11393
 - non-vascular connective tissue, structure in fish, 4345
 - occurrence of methionine in human, 15034
 - pain sensation, edema and erythema, relations, 5698
 - permeability, electrophoresis and, 10833
 - pigmentation. (See also *Pigments*.)
 - etiology, 5903
 - induced by neural crest grafts in chicks, 5954
 - by ultra-violet, 3563
 - Plasmodium* sporozoites at site of mosquito bite, 5088
 - reactions, to gonococcus filtrate extract, local. (See also *Shwartzman phenomenon*.)
 - to purified protein derivatives vs. old tuberculin, 16827
 - as quantitative indicators of antigenic activity, 6044
 - to testicle extract, 6093
 - to variola virus, beef testicle as affecting, 16859
 - redox potential, scorbutogenic diet as affecting, guinea pig, 16332
 - reducing action, light as affecting, 5469
 - regeneration, carcinogenic substances as affecting, mice, 4188
 - resistance, induced muscular tension as affecting, 2254
 - respiration through, insects, 3779
 - "S" factor in liver, in therapy of acne vulgaris, 14947
 - sensitization, by intranasal pollen instillation, 13439
 - in man vs. animals, gross and microscopic changes, 17141
 - sensitizing serum, fractionation, 6037
 - spotted, inheritance, man, 1793, 8966
 - spread of vital dyes in, mice, 701
 - subcutaneous tissue, sarcoma, hydrocarbons and, 14900
 - xanthoma, cholesterol and, rabbits, 14905
 - subcutaneous tumors, hydrocarbon induced, morph., 14877
 - production, castration as affecting, mice, 14907
 - syphilitic affections, 4608
 - tanning, sex hormones as affecting, man, 7542
 - role of ♂ sex hormones in, man, 333
 - temp., detn., 224
 - as influenced by:
 - caffeine, man, 11252
 - humidity and temp. of air, man, 3665
 - posture, 7412
 - respiration, 4090
 - measurements, 697
 - test, for *Coccidioides* infection, 8122
 - with cooked vs. uncooked foods, 15150
 - in trichinosis diagnosis, 8699
 - in tuberculosis, value for epidemiological index, 8127
 - window patch, applications, 17145
 - thermal sensitivity, evidence against Alrutz theory, 2207, 2208
 - trophic innervation, study, 11194
 - tuberculosis. (See under *Tuberculosis*.)
 - tumors, epithelioma, with bronchial cancer, in tar worker, 16870
 - estrogens as affecting, in rabbits, 596
 - in immunization of stomach to same, 16836
 - melanotic, anat.-clin. observations, 4218
 - hist., fishes, 582
 - produced by dibenzanthracene, mice, 11295
 - by methylcholanthrene, mice, 11292
 - by ox bile, mice, 16885
- Skin (continued)**
- ulcer in Hodgkin's disease, case, 600
 - vascular beds, smoking as affecting, 12648
 - vascular reactions in, 12643
 - vasodilation, heat and exercise as affecting, 5722
 - vasomotor reactions, of central and reflex origin, 14730
 - on central stim. of depressor nerve, 5723
 - vibratory sensation, local anesthesia as affecting, 11131
 - wheals. (See *Wheals*.)
 - Zn content, in beriberi, 11388
- Skull.** (See also *Chondrocranium; Craniometry; Face; Head*.)
- anatomy in cattle of pure race, 711
 - "Australoid" in California, measurements, 5923
 - development of nasal bridge, 11435
 - Egyptian, excavated at Palestine, 17029
 - intraparietal groove in, 724
 - European, from lower Paleolithic to recent times, review, 5933
 - Florisbad, fissuration of frontal endocranial cast, 5924
 - of *Galesaurus planiceps*, anatomy, 666
 - of horses, taxonomic study, 4406
 - from Iran, 2460
 - measurements in primates, 17016
 - micro and macro, non-pathological, America, 11436
 - neolithic, dental disease and irregularities in, 13316
 - Nordic and Mediterranean, contours, differential diagnosis, 9720
 - paleolithic, from East Africa, 9716
 - in *Periphithalmus* sp., (Pisces), 5153
 - of pig, measurements, 11479
 - Pitldown and Swanscombe, anatomical characters, 723, 17019
 - pneumatization, in Anthropoids, significance, 9717
 - Reihengraber type, 9744
 - and skeletal remains from Lonetal, 9756
 - Steinheim, characteristics and affinities, 9718
 - Stetten, racial affinities, 9734
 - Swanscombe, racial affinities, 17024
 - Tasmanian, in collections, Australia, 9757
 - trepanation, in Metal Ages, 11434
 - vertebrate, development, book, 4304
- Skunk.** (See also *Mephitis; Spilogale*.)
- endemic typhus susceptibility, 2632
 - Slash, burning, effect on soil and vegetation, 9013, 9020
- Sleep,** awakening from, electroencephalogram, acoustic stimuli as affecting, 16691
- of birds, 8841
 - book, 16697
 - brain electrical reaction to auditory stimuli during, 12643, 16690
 - brain potentials during, dominant and non-dominant a-groups, 2227
 - factors affecting, 2220
 - head direct current potentials during, 5690
 - hypnotoxin theory, 7686
 - motility during, children, 16711
 - psychopathic and feeble-minded patients, 9446
 - normal and pathological, 16637
 - peripheral vasomotor changes, 14768
 - skin temp. during, in acrocyanosis, 11263
 - temp. changes in cortex and hypothalamus during, 2243
- Sleeping sickness.** (See *Encephalitis, epidemic; Trypanosomiasis*.)
- Sleet, damage to trees, 3501
 - Slides, permanent method of labeling, 11429
- Slime molds.** (See *Myxomycetes*.)
- Sloanea* (p.1866), n. sp., 6437
- Sloth.** (See also *Bradypus* and other genera.)
- activity, factors increasing, 12935
 - emotional reactions in, 9142
 - ground, plant fossils in dung, Arizona, 7048
 - Pleistocene, from S. California, 1656
 - poikilothermism in, 5214
- Sludge** (See *Sewage*.)
- Slug(s).** (See also *Gastropoda*.)
- field, damage to potatoes, 12182
 - Klossia in kidneys, 10528
- Smallpox.** (See *Variola*.)
- Smear(s).** (See *Microscopical technic*.)
- Smell.** (See also *Odor; Olfactory*.)
- action of thiocyanate, 5776
 - central system, 12643

Smell (continued)

- conditioned response, *Nemeritis*, . . . 5681
 discrimination, in anophelines, . . . 15924
 in house flies, . . . 10478
 olfactory thresholds, detn., . . . 1947
 reactions of *Drosophila*, . . . 443
 use in maze learning, rat, . . . 9441
 Smelt. (See also *Osmerus*.)
 as interm. host to *Porrocaecum*, . . . 10496
Smilax (p.1865¹), fungus pathogens, 11814
 extracts, diuretic property, . . . 6536
Sminthuridae (Collembola), p.1875¹
Sminthurus (p.1875¹), revision, . . . 6943
 Smith, J. Henderson, portrait, . . . 7075
Smittia (p.1877³), n. sp., . . . 6889
 Smoke. (See also *Fumes*; *Industrial gases*.)
 cigarette, in decomposition of halo-
 genated hydrocarbons, . . . 11359
 -cured fish, cold storage, . . . 10033
 drift, effect on weather, . . . 16238
 public health problem, . . . 14990
 tobacco, effect on longevity, man, . . . 433
 wood, chemical, comp., . . . 10054
 Smut(s). (See also under the genera and
 hosts attacked, e.g., *Cereals*, *Oats*.)
 diseases, cereal, allergy to, . . . 15143
 . . . 15144
 antigenic factor, nature, . . . 15144
 fungi, serological differentiation, . . . 2797
 of oats, vars. resistant to, . . . 1205, 1206
Smythurus viridis, population study, 1832
 Snail(s). (See also *Gastropoda*; *Mollusca*.)
 eradication, factors affecting, . . . 6743
 feeding on fungi, . . . 4742
 feeding trails described, . . . 14228
 habitat in dry season, fascioliasis and,
 England and Wales, . . . 12261
 heart, Ca and Mg as affecting, . . . 3548
 as interm. host of *Dicrocoelium*, . . . 14183
 of *Echinostoma*, Java, . . . 17911
Klossia in kidneys, . . . 10528
 land, as interm. host of poultry fluke,
 Hawaii, . . . 14157
 mesenchymal musculature, histogenesis,
 . . . 8062
 radula, morph., effect on feeding habits,
 . . . 14228
 shells, containing hermit crabs, ecology
 of *Hydractinia* mats on, . . . 15982
 Snake(s). (See also *Reptilia*; *Rattlesnake*.)
 antivenin. (See *Antivenin*.)
 bite, in Cameroon, . . . 10633
 snake-serum therapy, . . . 9880
 symptoms and treatment, Australian
 snakes, . . . 5164
 diseases, in Far East, . . . 1010
 gopher, capturing ground squirrel, 7038
 grass, *Eimeria* in, . . . 6770
 hemagglutinins and hemagglutinogens,
 . . . 4534
 patch-nosed, study of genus, . . . 6981
 poisonous, of Cameroon, . . . 10633
 sera, hemolytic power and complement,
 . . . 4434
 spp. and scale counts in Mozambique,
 . . . 3399
 teeth, fang structure and operation in
 rattlesnake spp., . . . 18054
 solid and grooved, successional
 theory and, . . . 11424
 of Uganda, field guide, . . . 14290
 of U. S., field guide, . . . 14289
 venom. (See under *Venom*.)
 viviparous, structure of placenta and
 corpus luteum, . . . 7599
 Snapdragon. (See also *Antirrhinum*.)
 rust, vars. resistant to 2 physiol. races,
 . . . 3169
 Soap. (See also *Oleate*, *sodium*; etc.)
 action on lipid extraction from serum,
 . . . 12729
 adsorption of vit. A from oils by, 7471
 pharma. earthworm, . . . 16769
 Sobilminol, in syphilis therapy, oral
 admin., . . . 11589
 Social insurance, in S. America, . . . 18655
 Social security, relation to vital statistics,
 . . . 18654
 Socio-economic factors, in cardio-vascular
 diseases, . . . 996
 in metabolic diseases, . . . 995
 in renal diseases, . . . 995
 in respiratory diseases, . . . 6209
 Sociology, animal. (See under *Com-
 munities*.)
 Sodium, absorption, by mangels and sugar
 beets, . . . 17583
 amt. in mollusc, . . . 6824
 in ash of *Cysticercus*, . . . 17910
 detn., . . . 1932
 in blood, . . . 14482
 in urine, . . . 2140
 effect on fluoride toxicity, . . . 4152
 in erythrocytes, . . . 1991, 5512
 excretion, urine output and, . . . 16654

Sodium (continued)

- factor, of adrenals, . . . 12643
 hereditary response to different
 levels, tomato, . . . 12527
 ions, erythrocyte permeability to,
 dog, . . . 10836
 magnesium and, ion antagonism in
 action upon oxalate ion, 7251
 in muscle, stim. as affecting, *Mytilus*,
 . . . 13098
 radioactive, absorption rate, . . . 3546
 distr. in tissues, . . . 12643
 excretion in adrenalectomized rats,
 with and without salts, 7247
 urinary excretion in adrenal-
 ectomized rats with and
 without salt, . . . 12643
 arsenite. (See under *Arsenicals*.)
 azide, effect on embryonic fish heart,
 . . . 12643
 separation of resting and activity
 muscle metabolism with, 9505
 . . . 12643
 benzoate. (See under *Benzoates*.)
 bicarbonate, disinfectant value of boil-
 ing solutions, . . . 2679
 effect on excretion of vit. C, children,
 . . . 2343
 ketogenic activity, . . . 12643
 sporocidal action of solutions, . . . 990
 biselenite, use in seed testing, . . . 12010
 bromide. (See under *Bromides*.)
 chlorate, as herbicide, for bindweed,
 . . . 17565
 effect on soils, . . . 13804
 chloride. (See also *Salinity*; *Salt*.)
 in Addison's disease, . . . 3674
 in blood. (See under *Blood*.)
 distr. in mammalian tissues, . . . 7254
 effect on:
 blood coagulation, . . . 3617
 diabetes insipidus, . . . 11354
 intestinal absorption of glucose in
 adrenalectomized rats, 7499
 muscle excitability and sensitivity
 to acetylcholine, . . . 2131
 excretion, as influenced by post.
 pituitary extracts, rat, 14633
 ham (cured) content, . . . 6265
 ingestion, effect on Hb conc., . . . 16435
 intestinal absorption, adrenalectomy
 and, . . . 7506
 rate, . . . 3761
 isotonic conc., detn., . . . 5435
 partition between blood and vitreous
 body, selacii, . . . 12746
 radioactive isotope, effect on dog,
 . . . 4116
 solutions. (See also *Salt*, *solutions*.)
 hypertonic, effect on:
 blood proteins and viscosity,
 . . . 10932
 epilepsy, . . . 14840
 exptl. shock, . . . 4081
 nerve excitability, . . . 11140
 thirst induced by, study, . . . 12643
 effect on lymph flow, . . . 7396
 on sham-drinking, dog, . . . 3672
 intravenously, effect on erythrocytes,
 . . . 1981
 citrate. (See under *Citrates*.)
 cyanide. (See *Cyanides*.)
 dehydrocholate. (See under *Cholates*.)
 diethylmalonylurate. (See *Barbital*.)
 dithiosalicylate, in tuberculosis (exp.)
 therapy, . . . 13554
 fluoride. (See *Fluorides*.)
 fluosilicate. (See *Fluosilicates*.)
 formaldehyde sulfoxalate, in mercury
 poisoning, . . . 16761
 gluconate, alkalinizing action when orally
 administered, . . . 2307
 effect on urine and blood pH, . . . 4119
 . . . 4120
 hippurate. (See *Hippurates*.)
 hydroxide, effect on aggregation of tad-
 poles in light, . . . 7615
 hypochlorite. (See under *Hypochlorites*.)
 iodide. (See under *Iodides*.)
 lactate. (See under *Lactates*.)
 lauryl sulphate, selective bacteriostatic
 and fungistatic actions, . . . 4648
 mucate, decomp. by *Aerobacter cloacae*,
 . . . 9990
 nitrite. (See under *Nitrites*.)
 oleate. (See under *Oleates*.)
 perborate, irritant action, . . . 541
 phenylethylmalonylurate. (See *Pheno-
 barbital*.)
 phenylpropionate, effect on pupil, 14847
 polyanethol sulphate, effect on blood
 culture media, . . . 9991, 10001
 salicylate. (See under *Salicylates*.)
 sulfate, diuresis caused by, factors
 affecting, . . . 16648

Sodium (continued)

- sulfate (continued)
 effect on phage-bacterium reaction,
 . . . 2619
 sulfite, in differential culture media,
 . . . 8273
 serum globulin pptation. by, . . . 12764
 taurocholate. (See under *Taurocholates*.)
 thioyanate. (See under *Thioyanates*.)
 thiosalicylate, in tuberculosis (exp.)
 therapy, . . . 13554
 thiosulphate. (See under *Thiosulphates*.)
 Sodoku. (See *Rat-bite fever*.)
 Soft chancre. (See *Hemophilus ducreyi*.)
 Soil(s). (See also *Ammonification*; *Fertil-
 izer*; *Forest soils*; *Humus*; *Nitrifica-
 tion*; *Nitrogen fixation*.)
 acids in organic matter as affecting,
 . . . 13854
 acidity. (See *Soil*, *reaction*.)
 actinomycetes, polysaccharides formed
 by, nature, . . . 8365
 adsorption of nutrient ions by, method
 of study, . . . 2928
 for *Aleurites*, U.S.S.R., . . . 1247
 algae inhabiting, . . . 1066, 4730
 alkali, oxidizing power, . . . 4935
 improvement with gypsum, . . . 15603
 with rice and berseem, India,
 . . . 2956
 unusual type in Oregon, . . . 2967
 aluminum, effect on P fixation, . . . 6501
 amendments, effect on nitrifying and
 denitrifying power, . . . 1043
 limestone, effect on P utilization,
 by *Lespedeza*, . . . 10175
 ammonia, evolution from fertilizers in
 winter, . . . 10071
 formation by bacteria in, bacterial
 counts estimated by, . . . 8346
 analysis, photoelectric colorimeter in,
 . . . 8488
 for apple and cherry trees, N. Y., 15587
 for apple trees, effect on root systems,
 . . . 8504
 nutrients in, W. Va., . . . 15588
 Arctic, properties, . . . 17609
 As toxicity in, . . . 12108
 fixation as affecting, . . . 12111
 bacteria. (See also specific genera, e.g.,
Azotobacter; *Legume nodule bacteria*;
 etc.)
Azotobacter, from acid., . . . 10072
 fertilization of citrus orchards as
 affecting, . . . 17442
 autochthonous and zymogenic groups,
 . . . 13690
 bactericidal agent from, . . . 6160
 . . . 13694, 13695, 17451
Bacterium globiforme in, factors af-
 fecting and incidence, . . . 1051
 detn. method, . . . 8346
 improvement of forest soils as af-
 fecting, . . . 15635
 legume nodule, in S. Carolina, . . . 2744
 numbers in, synchronous changes
 in podsoils, . . . 1048, 13687
 physiological groups and factors
 affecting, . . . 8347
 relation to growth of crop plants,
 . . . 15537
 sulphate-reducing, isolation, . . . 6320
 survey in relation to fertility, . . . 2743
 suspensions in sterile, accuracy of
 plate counts, . . . 1050
 as bacterial growth medium, moisture
 changes as affecting, . . . 1047
 base exchange in, detn., . . . 6500
 factors affecting, 10194, 15582, 17603
 and reaction with carbonates, . . . 4861
 base-forming elements in, P. I., . . . 17613
 black, of Germany, time of formation,
 . . . 7188
 black pigment in, factors correlated
 with, . . . 11964
 bog mud of Lake Pomoria, biochemistry
 and therapeutic use, . . . 17428
 book, . . . 11962
 B as affecting, N. J., . . . 15572
 buried viable seeds in relation to sur-
 face vegetation and altitude,
 . . . 16261
 calcium, effect on N fixation by legumes,
 . . . 17419
 carbon, detn., . . . 1216
 factors affecting, . . . 15550
 CO₂ in, effects, . . . 1222
 microorganisms in relation to, . . . 8349
 in orchard, . . . 13866
 production in muck, mineral elements
 as affecting, . . . 11787
 relation to photosynthesis, . . . 12083
 for cereals, relation to water require-
 ment, . . . 4838

SUBJECT INDEX

Soil

Soil (continued)

changes, during natural succession on abandoned land, Nebraska, 9019
chemical comp., crops and tillage as affecting, 3479
chemistry and geology, France, 15580
in citrus orchards, green manures as affecting, 3010
classification for forest production, Finland, 15621
clay, base exchange in, 2966
Ca absorption and pH, CO₂ pressure as affecting, 13861
photometric detn., 4858
as substrate for snails, England and Wales, 12261
clay loam, moisture content at wilting point of rice plants, (NH₄)₂SO₄ as affecting, 17589
for coffee, relation to fertilizers, 13875
colloids, California, 17617
in Cecil and Susquehanna soils, 6499
inorganic, decomposition, 13790
minerals in, estimation, 17605
identification, 17616
composition and pH, tillage as affecting, 1221
conservation, book, 14317
and relation to society, book, 15581
copper from fungicides in, effect on bacteria and crop plants, 15405
for cotton, Argentina, 6472
crushed bone in, dissolution by molasses fermentation, 4689
damping-off and seed decay in, control by bacterial antagonism, 6293
in deficiency disease of cattle, 6228
denitrifying power, fertilizers, etc., as affecting, 1043
depth and slope, effect on corn and oats yields, 17594
desert, bioactivity in, 17424
dicyanodiamide and derivatives in, ammonification, 17430
disinfection, by calomel, against potato scab, 3169
by chloropicrin, 3169
by CS₂ and chloropicrin, 3169, 17843
by cyanamid, 10374
against potato eelworm, 1433
by electric heaters, 3169
fungicides for, 6684
handbook, 10378
against *Heterodera schachtii*, 1460
by Hg compounds, 10372
by HgO, 3169
methods, 15891
against *Phytophthora*, 1482
against *Pythium*, antibiosis of *Penicillium* as factor, 4997
review, 12158
dolomite, decomposition, effect on soil pH, 17607
drifting, use of wind tunnel in study, 10204
effect on N fixation by legumes, 17419
on potato yields, 11938
on snail distr., England and Wales, 12261
electrodialysis, factors affecting, 11969
epidemiological relations, 11711
erosion, in Africa, 9032
and conservation, bibliography, 7084
control, 9037
book, 11959
by cover crops, 1238, 6496
in orchards, 11988, 13867
plants for eastern Washington, 10199
use of grasses in, 6493
woody plants as aiding, book, 4760
in Natal, 11966
problems, India, 9031
rainfall, cropping and cultural methods as affecting, 14383
relation to mosquito control, 10434
S. Africa, 13853
and surface run-off in Java, 106
type of cultivation and rainfall as affecting, 15550
types of damage in India, 9015
and water content, crop residues and mulches as affecting, 17575
and water relations in relation to prairie grass root systems, 16265
by wind, control in Great Plains, 105
in world agriculture, 5370
exchangeable cations in, effect on P availability, 10208
factors in detn. of calcicole and calcifuge habit, analysis, 129
fertility, bacterial flora and, 2743
in compost, manure as affecting, 15574

Soil (continued)

fertility (continued)
lab. method of detn., 4859
in Pennsylvania, 15571
problems connected with minor elements, 1354
use of Neubauer test for, 6475
6479, 6482
of fertility plats, fertilizer residues in, 2970
fertilizers, NH₃ evolution in winter from, 10071
requirements, rapid tests for, 10196
of forests. (See under *Forests*.)
fungi. (See under *Fungi*.)
for grapefruit, with different rootstocks, 8505
greenhouse, mixer and sampler for, 8480
ground water, occurrence in Arizona, 7175
heat of wetting, factors affecting, 10207, 10213
pH. (See *Soil, reactions*.)
inoculation, with mycorrhiza of pines, 3169
insects, maybeetle larvae migration, 14135
of meadows and pastures, 15904
insect pests in, control by high frequency electric field, 1526
insecticides. (See *Insecticides*.)
iron, effect on P fixation, 6501
irrigator, for use in pot exps., 14033
laboratory teaching, technic, 10201
leaching of N fertilizers from, 2964
of salt from, irrigation as affecting, 8485
lignin decomposition in, review, 1044
lime as affecting, Scotland, 15582
limestone, productivity and chemistry, 13847
lysimeter, N removed from, vegetative cover as affecting, 13818
magnesium in, effect on N fixation by legumes, 17419
mechanical analysis and aggregation, expression, 2973
Mediterranean loess, salt water as affecting, 11968
of Mexico, 1220
of Michigan, K content and relation to fruit-growing, 2991
microbial activity in, alkali salts as affecting, 1045
base replacement by H as affecting, 1049
in muck, mineral elements and, 11787
microbiological characters, study scheme, 17429
microbiology, book, 2968
principles and methods, 6296
microfauna, as destroyers of forest litter, 1290
microorganisms in, abundance, benzoic acid compounds as affecting, 17433
antibiotic effects on *Ophiobolus graminis*, 1419
on seed-borne phytopathogens, 1464
auxin production by, 17435
Cu as affecting, 15405
enviromal factors as affecting, 13686
of rhizosphere, significance, 8349
qualitative study, 2743
of rhizosphere, significance, 8349
minerals, movements, factors affecting, 4911
relation to those in forage crops, 17604
slash burning as affecting, 9013
tillage as affecting, 1221
molds in, 17435, 17437
muck, crops adapted to and culture, Michigan, 1240
fertilizers for, Indiana, 1238
fertilizers for vegetables on, 1248
nutrient contents and value for lettuce, N. Y., 15602
sulphate production in, 15406
for mushrooms, 10224
of Netherlands Indies, 1825
nitrates in, detn., 10209
and moisture content, factors affecting, 8468
nitrification, vs. ammonification, maxima of curves compared, 8347
as influenced by:
fertilizers, 1043, 4826, 17442
mineral elements, in muck, 11787
sunlight vs. microorganisms, 17436
seasonal changes, 10071

Soil (continued)

nitrogen, crops and tillage as affecting, 1221, 8479
factors affecting, 15550
-fixing power, cropping as affecting, 8345
loss through decomposition of nitrites, 17612
organic, solubilization and movement, 17621
and plant cover density, rôle in maintenance of grasslands, Iowa, 3500
relation to root competition, 10257
N and C content, factors affecting, 15550
of nurseries, rejuvenation, 15613
nutrients, fertilizer as affecting, 17582
rapid tests for, 10196
removed by broccoli, 17639
sampling method, 17582
orchard, lateral distr. of K in, 13855
O₂ and CO₂ in, 13866
pore space unoccupied by water in, capillary tension as measure, 13850
K availability in, 13852
organic matter, climate as affecting, 1218
rainfall as affecting, 13858
variation with crop grown, 2975
origin, classification, and mapping, book, 2965
oxidation-reduction potentials, factors affecting, 13863
peat, extraction and analysis, 13860
humic acids in, neutralization curves, 17603
water requirements of vegetables on, 1234
for pecans, southern U.S.A., 3004
permeability, relation to porosity, 15575
to water, water content as affecting, 13859
phosphates, in extracts, detn., 10206
17737
factors determining, 13802
fixation, kaolinite as affecting, 13824
relation to Fe and Al, 6501
solubility in, pH as affecting, 6522
Neubauer testing method, plants suitable for, 6475
super-, movement and fixation, 1215
P and K fixation, exchangeable bases as affecting, 17614
physical characters, in relation to plant community, France, 7198
for pine, Arkansas, 1309
podzol, fertilizers for, 8481
poisons for termites, 10463
potassium, effect on N fixation by legumes, 17419
in orchards, availability, 13852
lateral distr., 13855
potash, in Michigan, relation to fruit growing, 2991
for potatoes, effect on fertilizers, 13973
in Wisconsin, 10174
profiles in relation to climax vegetation, Morocco, 7204
protozoa in, E. Greenland, 14200
puddled, effect on plant growth, 2969
reaction. (See also *Calcicoles*; *Lime*; *Silicicoles*.)
acidity in forest soils in Finland, 15622
seasonal variations in woodlands, 16251
for citrus, avocado and walnut, 15595
effect on:
B absorption by plants, 15572
Cu in tomatoes, 13916
dialysis, 11969
potatoes, growth and starch content, 8473
potato brown rot, 15868
potato scab, 12156
forage plants as affecting, 17573
for lettuce and tomatoes in greenhouses, 13883
and porosity, manure and lime as affecting, 4822
relation to geological origin, 8486
to plant cover, 5381
to weed growth, 16260
tillage as affecting, 1221, 4836
redox potential, detn., 10212
relation to deposition of eggs of *Romalea*, 9006
sampling, apparatus and technic, 4860
preservation of small core samples, 10205
sandy, dist. of pocket gophers and, 3492

- Soil (continued)
 sandy loam, permeability to peach roots,18373
 science, book,2965, 2968
 proceedings for 1938, S.S.S.A., 15579
 seleniferous, in S. Dakota,3508
 in U.S.A.,2925
 Se in, availability to plants, and relation to plant nutrition,10197
 conc., public health problem,14938
 silt, structure, rain as affecting,13857
 soluble salt in, irrigation as affecting,8485
 solution studies, value,8478
 of S. Africa, deterioration and causes,13853
 steam sterilization, factors affecting,11709
 sterilized, recolonization by invertebrates,12572
 structure, cultural treatments as affecting,11961
 effect on sugar beet yields,6469
 subsoil, frozen,8202
 suction force at marshy regions of North Sea coast,12582
 sulphate production in fallow vs. cropped,15406
 survey, Alabama,8483
 Calif.,17606
 France,11967
 Georgia,13856
 Iowa,15577, 17615
 Kansas,2976
 Michigan,11971
 Nebraska,4857, 8484, 15573
 New Hampshire,17618
 New York,1223, 15583
 N. Carolina,2972
 Ohio,2971, 15578
 Oklahoma,11965, 17610, 17611
 Pennsylvania,1217, 11960
 Philippine Is.,4856
 Puerto Rico,13848
 Rhode Island,11970
 South Carolina,1219
 Texas,2974, 10210
 Utah,6504
 Washington,6503
 Wyoming,10211, 15576
 of Tasmania,16268
 temperature, effect on:
 dialysis,11969
 potatoes,13817
 sugar beets,2936
 water absorption and guttation,8578
 forest fires as affecting,15646
 in irrigated cotton field, India, 2931
 readings,8989
 texture, effect on shape of beet roots,11992
 and fertility, relation to action of herbicides,10336
 for tobacco, exptl. technic,17566
 toxicity, as cause of tobacco frencing,4986
 NaOCl₂ as affecting,13804
 toxins, rôle in tobacco brown rootrot,15838
 treatment, for Jap. beetle control,12208
 for *Naupactus* control,5025
 for nematode control,1465
 for root aphid control,5042
 for wireworm control,5033
 type, in beech stands of Denmark, analysis,5383
 fungal species in relation to,5389
 in Morocco and S. Australia, comparison,7209
 in relation to silviculture,4390
 utilization, effect on malaria, Italy,8696
 for vanilla, Puerto Rico,8511
 water, (See also *Water*)
 absorption, by rice, temp. as affecting,6485
 apparatus for keeping constant,14033
 availability, puddling as affecting,2969
 capacity, effect on root distr., *Agave*,14393
 differences on slopes of ridge, Indiana,3511
 economy of upland prairie and alfalfa vegetation,120
 effect on:
 cereal smuts,1467
 growth responses of plants, 12587
 osmotic pressure, oats shoots,17690
 permeability,13853
- Soil (continued)
 water (continued)
 effect on (continued)
 water utilization by forage crops,1203
 wheat, N content,8466
 as influenced by:
 annual crops,13851
 bindweed,10177
 crop residues and mulches,17575
 tillage,4863
 vegetative cover in sandy,8551
 measurement, under field conditions,8526, 13849
 formula for,6498
 method,12600, 14380
 optimum for crop plants,15537
 relation to depth and root growth,15552
 to tree vegetation, Hungary,6531
 and temp., relation to growth of cotton root rot fungus, 10371
 shade as affecting,13914
 water-logged, fertilizers for,17430
 wine waste toxic to,13904
 wireworm distr. and control,5033
Soja. (See also *Glycine*; *Soy bean*)
hispida, N compounds in,8587
 oil content, climate as affecting, 3046
Sol(s). (See *Colloids*).
Solanaceae (Dicotyledones), p.1867²
 alkaloids, pharm.,16773
Solanum (p.1867²), n. spp.,2882, 6437
 directed heritable variations conditioned by euploidy,5320
 susceptible to tobacco mosaic virus, in Brazil,12137
acaule-*S. antipovicii* hybrids, cytology,80
demissum-*S. tuberosum* hybrids, meiosis, inheritance,12517
gracile, chromosomal chimeras and polyploidy,7097
lycopersicum. (See also *Lycopersicum*; *Potato*).
 intracellular gene effects of transplants,8944
torvum, in Fiji, history, distr., and control,1196
tuberosum. (See also *Potato*).
 phloem development and flowering,10172
 proliferation of amyloiferous tissue in vitro,11925
villosum, chemistry and pharmacology,1332
 Solarimeters, for measuring biological radiation,16243
 Sole, growth rate, method of detn.,3528
 lemon, tagging expts.,10812
 Sole patterns. (See *Dermatoglyphics*).
Solea (p.1879⁴) *solea*, sensory papillae,3391
vulgaris, growth rate,1859
Soleidae (Pisces), p.1879⁴
Solenidae (Mollusca), p.1872⁴
Solenochilus pectinifer (F), in Ohio,3305
Solenodon (p.1882³), correct German vernacular name,12452
paradoxus, ♂ urino-genital system, 7051
Solenodontidae (Mammalia), p.1882²
Solenopsis as pest of quail, control,3541
geminata, as affecting rice caseworm larvae, Philippines,5039
Solenospermum (p.1866³), n. spp. and n. combs.,15504
Solenostemma (p.1867³), morph. anat.,11899
Solganal, brilliant green therapy, of spirochaete infections,824
 effect on blood picture,825
 on relapsing-fever vs. *Trypanosoma rhodesense*,825, 13542
 -B, infectious polyarthritits therapy by,9916
Solidago bicolor, forms confused with,11875
serotina, cellulose of, chemistry and properties,1319
Solidaster (p.1867⁴) *luteus*, name of yellow hybrid aster,10134
SOLNHOENISTOMITES (J)(Coel.) (p.1869³), n. sp.,6778
stechowii, position,6780
Solubea (p.1875³) *pugnax*, host plants, habits, migration, populations, injury to rice,12185
Soluseptazine. (See under *Sulfamide*).
Solustibosan, in kala azar therapy, 2666
 hamsters,11609
 Solutions, colloidal, particle size and surface area,1388
 hypertonic, effect on immunity,899
- intravenous injection, apparatus for,16397
 study,7245
Solvea (p.1877³), n. sp.,5195, 6901
Solvarsin, cerebro-spinal fluid trypanocidal after,2304
 Solvents, organic, toxicity, hypnotic and irritant action,4131
Soma. (See *Sarcostemma acidum*).
Somataria (p.1881²) *mollissima*, eggs, average number,5421
spectabilis, mating and nesting,8844
Somatidia (p.1876³), n. sp.,10595
 Sonne dysentery. (See *Dysentery, Sonne*).
 Soot, removal from apple trees, spray for,15589
Sophora tetraptera, alkaloids in seed, 10286
Sorbaronia (p.1865⁴), tax.,8435, 15486
 Sorbitol, bacterial utilization,2757
 detn. and distr. in body fluids,7879
 effect on intracranial pressure,2380
 metabolism,3691, 9196, 10980
 resin from,12024
 Sorbose, bacterial utilization,2757
 metabolism,10980
Sorbus (p.1865⁴), tax.,8442, 15486
 ripening and respiration, as influenced by temp.,1390
 synopsis, N. American spp.,8435
Sorex (p.1882²), tax., 8855, 12457, 18088
 ecology,5239
fontinalis, in Virginia,7038
juncus umbrosus, in Vermont,5222
tundrensis, range extension in,14512
Sorghastrum (p.1864³), n. spp.,2828
Sorghum(s). (See also *Andropogon*; *Milo*).
 analyses and cellulose extraction from,8458
 chlorophyll variations, inheritance,4933
 growth rate, relation to seed size, 2921
 HCN in, variety tests,10183
 use of I for testing,10285
 linkage in,82
 lodging, due to *Sclerotium batatcola*,15889
 roughage plus Ca as sheep feed,11482
 tillering, var. tests, Okla.,11954
Sorghum (p.1864³). (See also *Andropogon*; *Sorghum*(s)).
 spp., biology, distr., and culture in Germany,6484
 races,10120
Sorgo. (See *Sorghum*).
Soricidae (Mammalia), p.1882¹
Sorocelis (p.1869⁴) *americana*,10541
17935
 Sound. (See also *Acoustics*; *Ear*; *Hearing*).
 high frequency waves, effect on catalase and physical properties of blood,12674
 on reconstitution and head frequency in *Euplania*, 7627
 fractionation of bacterial extracts by,13418
 measurement,234
 perception, smallest interval, cat and rabbit,14703
 produced by friction of normal serosae,13130
 Sow bugs, from N. America,12822
 Soy-bean. (See also *Glycine*; *Soja*).
 acclimatization and var. tests, P. I.,4842
 allergy to dust,6116
 bacterial leafspot (*Phytophthora*),4972
 carotene in, vars. compared and weathering as affecting,17731
 culture and var. trials,17588
 drought resistance, physiology,14024
 effect on clay colloids,13790
 favorable to grasshopper abundance, Ark.,17875
 as feed for cattle,13355, 13356
 fertilizers for,1340
 flour in goiter-producing diet,10959
 fruit development, climatic factors and,12570
 hay, vit. A in,16507
 meal, hydrolysis and oxidation by molds,17751
 nodule bacteria, viability and effect on seed comp.,11786
 oil, in prevention of nutritional encephalomalacia, chicks,2403
 P distr. in, changes during germination,3081
 photoperiodism in, effect on metabolism,10318
 relation to light intensity,4928
 protein, extraction, chemistry,13837
 and food value,1213
 plasticization,11995
 and hardening method,11934

SUBJECT INDEX

Soy-bean-Spinacene

- Soy-bean (continued)**
Rhizobium japonicum inoculations, var. reactions,13688
 sauce, Ca added to,16460
 varieties, comparison, design of expts. for,16226
 velvet bean caterpillar on, control, 5024
 yield, spacing as affecting,10208
Spacelotheca, n. spp.,17500
 Spacing. (See also *Thinning*.)
 effect on yield, pecan trees,13909
 and quality, potatoes,1211
 rice,5462
 soybeans,10208
 strawberries,1238
 sugarbeets,15540
 of onion bulbs, for seed production,15601
 of sugarbeets, England,15549
 Spanish moss. (See *Tillandsia*.)
 Sparassidae (Arachnida), p.1874²
 Sparidae (Pisces), p.1880²
 labyrinth, anatomy and function, 9457
 Sparrow. (See also *Passer*, etc.)
 diurnal spermatogenic cycle, factors controlling,13046
 economic status and damage control,16289
 English, cestode parasites,1593
 sexual cycle, light as affecting, 5674
 house, habits,16101
 thyroid, physiology,5642
 plasmodia and toxoplasma-like bodies in, Venice,8711
 swamp, *Giardia* in,6773
 tree, habits in Japan,16094
 hatching and development of young,6989
 as vector of poultry parasites,1517
 Sparteine, detoxification by mineral waters,5756
 effect on acetylcholine action,13158
 on anaphylaxis,8099
 intracysternal application,5775
Spartina (p.1864³), spp. rel. to mosquito breeding, Md.,12214
townsendii, hydathode structure and development,11929
 Spasmolytic action, of amines,11210
 secondary and tertiary,9588, 9539
 of diphenylacetyldiethylaminoethanol,5784
 of drugs, constitution and,7812
 Spasmodophilia. (See *Tetany*.)
 Spatangidae (Echinodermata), p.1872³
 Spathiflorae (Monocotyledones), p.1864⁴
Spathus (p.1878²), n. spp.,14269
 Spaying. (See *Ovary*, *ablation*.)
 Species, concept, experimental bases for,5266
 concept and nature,5268
 differences, in Columbidae, genetic analysis,14371
 ecological isolation as affecting, 9035
 formation, data from biota of archipelagos of different age,5283
 in deerme in mts. of Utah,10664
 in plant pathogenic fungi. (See *Plant diseases*, *resistance*.)
 relation to birth rate and to climate,8901
 in wood rat,7046
 relation to genus,8900
 sub- animal, nomenclature,14816
 criteria,10682
 Specific dynamic action, of casein and beef muscle, rat,16446
 of diets varying in protein, rat,10952
 factors affecting,2017
 and net energy values of protein, carbohydrate and fat,14524
 of protein,12797
 of pyrroacetic acid,5580
 tests on castrated and menopausal women,3871
 Specific gravity, of animal tissues,12790
 detn. of dentine,5904
 of glands,10878
 of hookworm eggs,8708
 of plasma, apparatus for,7334
 variations in dogs due to respiratory modifiers,12643
 Specificity, of keratin derivatives,891
 streptococcal group, correlations with fermentative reactions,2541
 Spectograph(s), blood porphyrins studied by,7318
 catalogue,8614
 urinary porphyrins studied by,8264
 use in detn. of inorganic elements in biological fluids,12719
 Spectrophotometry, in study of bacterial metabolism,11790
 of fat transport and phosphorylation,14540
 of mouse melanin,1763
 Spectroscopy, photographic. (See *Spectrograph*.)
 Spectrum. (See also *Light*; *Spectrophotometry*; and specific portions of spectrum, e.g., *Infra-red*; *Ultraviolet*.)
 absorption, of androgen derivatives,12967
 of antilytic factor in carcinoma,4181
 of ascorbic, oxytetric, reductinic and crotonic acids,2069
 of carotene,2057
 of cytochrome C and Na₂S₂O₄,12711
 of erythrocytes,16337
 of estrogens,16436
 infra-red, of amino acids,1943
 of pituitary hormones,9285
 of serum albumin, factors affecting,5510
 ultra-violet, of bile pigment Fe compounds and bile pigments,14578
 of papain,14463
 of schistosomiasis sera,12251
 analysis, for detn. of Ca, K, Na and Mg,1932
 of honey,14153
 biological. (See *Life forms*.)
 of rhodopsin,444
 sensitivity of rods and cones,13059
 Speech. (See also *Voice*.)
 cortical centers,4082
 stammering, familial incidence,12561
 vowel formation,10831
 Speleology. (See *Cave fauna*.)
Spelotrema (p.1869⁴) *pygmaem*, in ducks, Michigan,1591
Speocyclus (p.1873³), n. sp.,6838
 SPERATA (Col.) (p.1876³), n. name for *Macrones*,10592
 Sperm. (See also *Fertilization*; *Germ cells*; *Semen*; *Seminal vesicles*; *Spermatogenesis*.)
 extracts, effect on fertilization reaction in *Arbacia*,9419
 glycolytic power and motility,11096
 as influenced by:
 extreme cold,417
 radium, *Pseudocentrotus*, 12699, 12705
 ultraviolet, *Urechis*,12686
 longevity, in bedbug,18012
 in genital tract, mic.,16663
 during hibernation, bat,3965
 testis hormone as affecting, fowl,3970
 maturation, mouse,16663
 morphology, fertility and, fowl,13047
 number, testosterone as affecting, man,8311
 spermatogenesis in marsupials,7578
 suspensions, fertilizing capacity, factors affecting,420
 transportation in ♀ rabbit,7592
 in uterus, rat,16661
 vitrified in liquid air, revival of frog,2164
 Spermatogenesis. (See also *Germ cells*; *Sperm*.)
 atypical, centrioles and chromosomes in, *Viviparidae*,8918
 in *Choeradodis rhomboidalis*,61
 diurnal cycle, factors controlling, sparrow,13046
 as influenced by:
 alcohol and acetic acid, *Isotetes*, 7109
 light, starlings,5665, 13031
 pituitary extract, rat,9362
 in *Limacina* (gastropod),6822
 in *Fusca domestica*,10723
 in *Porcellio scaber*,52
 Spermatophytes (p.1864⁴), phylogeny, 4722
 Spermatozoa. (See *Sperm*.)
 Spermine, effect on ♂ genitalia,16622
 on tissue oxidations,14807
 isolation as flavinate,16843
 Spermiogenesis. (See *Spermatogenesis*.)
 Spermophile. (See *Citellus*.)
Spermophilus (p.1864³), n. sp.,8382
Spicheloma (p.1862⁴), n. forms,17487
 hosts and distribution of spp., 2798
Ippia, on *Lippia*,14036
Spichelotheca (p.1862⁴), spore germination in,2814
 cruenta, heterothallism and spore germination,8113
sorghii, cyt. variation,15468
 lysis of promyelia, inheritance of,3169
Sphaeralcea (p.1866²), n. f.,1158
 in dung of ground sloth,7048
Sphaeranthus (p.1867⁴), n. spp.,1142
Sphaerectinus granularis, enucleated eggs, fertilization and development,787
Sphaerella (p.1861⁴), n. sp.,15453
Sphaeria (p.1861⁴), tax.,13736
 Sphaeriaceae (Fungi), p.1861⁴
 Sphaeriales (Fungi), p.1861⁴
Sphaeridiotrema (p.1870⁵) *globulus*, in ducks, Michigan,1591
 Sphaeriidae (Mollusca), p.1872⁴
Sphaerita dangeardi, parasite in *Euglena*,12283
Sphaerobolus stellatus, culture,15465
Sphaerodactylus, flicker response contour,11125
Sphaeropsis (p.1862⁴) *malorum*, syn., 13736
Sphaerostilbe repens, pathogenicity to lime,14088
Sphaerosporium (p.1863⁵), validity, 13736
Sphaerostylis (p.1866²), n. names,15505
Sphaerotheca (p.1861³) *parvosa*, control by water spray,6688
 on peach and rose, morphological differentiation,6687
 var. *persicae*, on peach, control, in Egypt,3149
 Sphagnaceae (Bryophyta), p.1863²
 Sphagnales (Bryophyta), p.1863²
 Sphagnum (p.1863³), (See also *Bogs*; *Peat*.)
 spp. dist. in German moors,9026
 graphic key,11897
 pools, testaceous rhizopods in, La,10526
 land,8423
 in Rhodesia,4733
'Tilletia' on,17935
Sphalloplana (p.1869²) *mohri*,17935
 Sphecoidea (Hymenoptera), p.1878²
Sphecophaga burra, cocoon dimorphism,12388
 Spheniscidae (Aves), p.1881¹
 Sphenisciformes (Aves), p.1881¹
 breeding habits,18068
 crested, identifying immature birds,7001
 malaria in, exptl. studies,12265
Spheniscus spp., malaria in syn.,12265
Sphenodon, eye, sclerotic plates structure,5879
Sphenomeris (p.1863²), name maintained,8421
Sphenophalos (p.1883³), review,8867
Sphenopholis (p.1864³), n. sp.,1158
Sphenophorus spp. (See *Calendula* spp.)
Sphenoptera parvula, on *Artemisia*,6871
Sphenopteridium (p.1864⁴) *† keltavi* (D), in E. Prussia,10097
Spheroides maculatus, host of *Stephanostomum tenue*,15986
 renal and vascular response to epinephrin,11093
 Sphingidae (Lepidoptera), p.1876⁴
 Sphingomyelin, detn. in body fluid and tissues,16377
 of erythrocytes, comp.,1938
 in organs, man,16378
Sphinz (p.1876⁴), morph. of abdominal somites,3358
Sphodromantis, regeneration in,435
Sphyraena (p.1879⁴) *argentea*, from Kodiak I.,3392
 from Vancouver Island,3377
 Sphyracidae (Pisces), p.1879⁴
Sphyracius (p.1881⁴) *varius*, life history,12437
 Sphyridae (Crustacea), p.1878³
Sphyrion (p.1873³) *lumpti*, on redfish, host-parasite relationship,16019
Spicaria (p.1863³) *anomala*, on *Abies*, as cause of wood stain and insect relations of,1428
farinosa var. *verticilloides*, as parasite of moth,12174
 heliothis, on corn ear worm,8205
 Spicule(s). (See *gones*, e.g., *Sponges*.)
 Spiders. (See also *Araneae*.)
 black widow. (See *Latroctes*.)
 caught by traps attached to airplanes,10767
 gynandromorphism in,3317
 harvestmen, behavior and habits, 17987
 on sweet corn,3311
 Spikelet. (See *Inflorescence*.)
Spilochalcis (p.1878³) *stimulans*, parasite of pink bollworm, Brazil,12231
Spilocryptus (p.1878³), new species on hemlock sawfly,18025
extrematus, spermatogenesis,16164
Spilogale (p.1882²) *angustifrons yucatanensis*,8856
Spilonota ocellana (Hymenoptera), on apple, control,10375
 Spinacene. (See *Squalene*.)

- Spinach. (See also *Spinacia*.)
 American vars., characters, history, and differences,1251
 Ca in, availability,2038, 16459
 chlorophyll-protein compounds in leaves, extraction,3084
 culture media containing,10076
Fusarium disease,15891
 green peach aphid on, control,17879
 photoperiodism in, temp. as affecting,15741
 virus diseases, in Netherlands,17739
 vit. C in,14565
 white rust (*Albugo occidentalis*), Texas,3169, 15813
 yellows (virus), symptoms compared with deficiency diseases,14068
- Spinacia* (p.1865²). (See also *Spinacia*.)
 oleracea, chloroplasts, isolation and study,16150
- Spinal cord. (See also *Meninges*; *Nervous system*.)
 asphyxia,5700
 effect on reflex activity, cat.,2245
 damage, extracts as affecting, rabbits,7903
 delimited, reflex phenomena in, dog,12643
 electrical phenomena, review,7244
 epidural space, lymphomatoid tumors,16839
 excitatory and convulsion mediators, frog,2241
 gray and white matter, volumetric study,4330
 heat formation, studies,464
 as influenced by:
 direct current, frog,2228
 intraspinal inj. of procaine, dog,11230
 x-radiation, monkey,12694
 medulla, extract, effect on hemostasis, rabbit,14804
 neurones, sensitization by partial section,13070
 of newborn and adults, quantitative study,682
 pathways for nictitating membrane reflexes, cat.,16684
 potentials in spinal shock,12643
 reflexes. (See also *Reflexes*.)
 reflex action and, review,7244
 reflex discharges, conditioning of afferent impulses by,16705
 rhythmic activity, nervous function-structure, fish,11149
 roots. (See *Nerves*, *spinal*, *roots*.)
 section, effect of anesthetics after, dog,2218, 12643
 reflexes after, monkey,452
 shock, cord potentials in,12643
 ventral horn cells, polydactyly and, mice,4335
- Spinal fluid. (See *Cerebrospinal fluid*.)
 Spinal ganglion. (See *Nerve ganglion*, *spinal*.)
- Spinal nerves. (See *Nerves*, *spinal*.)
 Spindle, mitotic. (See *Metosis*; *Mitosis*.)
 Spine. (See *Vertebral column*.)
 Spinulosis, *Aspergillus fumigatus* producing,8330
- Spio* (p.1871²), syn.,17982
Sponidae (Annelida), p.1871²,17982
Spiraea (p.1865²), n. combs. and n. sp.,15486
 aphids on,18020
Spiranthes (p.1865²), n. syn.,1158
Spirhapalum (p.1870²), syn.,6788
Spirifer (p.1871²), n. spp. (D),16001
Spiriferidae (Brachiopoda), p.1871²,16001
Spirillaceae (Bacteria), p.1861²,16001
Spirillum, in bovine abortion etiology,15364
 minus, in rat-bite fever,9969
 virus, in aborting ewes,11721
- Spirobolidae (Myriopoda), p.1873²,15364
Spirocera (p.1870²) longispiculata, from *Didelphis*,14213
sanguinolenta, in dogs, Surinam,15956
Spirochaeta (p.1861²). (See also *Spirochaetes*; *Spirochaetosis*; etc.)
canicola. (See also *Leptospirochaeta*.)
 serological comparison to *S. icterohaemorrhagiae*,858
cultus, in salivary glands, mosquito,14189
attenua. (See also *Borrelia* d.)
 immunity to, in absence of residual infection,13414
 neutrophilic variability in,13414
gallinarum. (See *Borrelia* g.)
hebdomadis. (See *Leptospirochaeta* h.)
icterogenes. (See also *Leptospirochaeta icterohaemorrhagiae*.)
- serological comparisons of strains
 and, with *S. canicola*,858
icterohaemorrhagiae. (See *Leptospirochaeta* i.)
 antigens, properties,6080
 culture requirements,8139
 immunity to,8139
 incidence in rats,8139
 staining,1584
icterohemolytica, agglutination test for,8154
pallida. (See also *Treponema pallidum*.)
 detection in primary lesions,17337
 as influenced by arsphenamines in vitro,817
 by bismuth compounds in vitro,816
 organ affinity, mutation, in rabbits,16896
persica, tick transmission,10011
pertenuis. (See *Treponema pertenuis*.)
rawsonii, from vagina,964, 14192
recurrentis. (See also *Borrelia* r.)
 behavior in hibernating animals, 853
 infections by, interference phenomena in chemotherapy,824
 longevity in tick vector,2670
- Spirochaetaceae (Bacteria), p.1861²
 Spirochaetales (Bacteria), p.1861²
 Spirochaetes, chapter in manual,14164
 culture contaminants lysed by lysozyme,865
 evolution,8899
 fowl. (See *Borrelia gallinarum*.)
 in gastric glands of man and monkey,9962
 infections, chemotherapy, 17244, 17245
 interference phenomena in,824
 as influenced by animal hibernation,853
 by lysozyme,865
 of relapsing fever. (See also *Relapsing fever*.)
 chemotherapeutic reactions of *Trypanosoma rhodesense* vs., 13542
 isolation from body fluids and tissues, media for,10004
 ticks infected by,15296
 transmission by tropical rat mite,17376
 in salivary glands, mosquito,14189
 stain technic for, modified Kanzier,9989
 in tissues,9993
 of Weil's disease. (See *Leptospirochaeta icterohaemorrhagiae*.)
- Spirochaetoides, action, O₂ and sulphhydryl groups as affecting,13178
 phenylarsenoxides as,17244, 17245
 Spirochaetosis. (See also *Spirochaetes*; and under specific organisms and diseases.)
 fowl. (See also *Borrelia gallinarum*.)
 immunization to,2598, 2599
 fuso, oral, systemic reaction to,11680
 icterohaemorrhagic. (See *Leptospirochaeta icterohaemorrhagiae*.)
 of poultry,2697
 vaginal,964, 14192
Spirocladia (p.1860²) minor,15436
Spiroclipeus (p.1868²) Higgins, (N),10517
Spirogonium (p.1860²) stricticum, conjugation,8375
Spirographis spallanzani reflexes in,462
Spirogyra (p.1860²), *Aphanomyces* on, 1082
 elasticity of protoplasm, ions as affecting,17691
 protoplasm, structure and elasticity,10308
- Spironema gallinarum*, immunization of fowls to,2598, 2599
 serological types and immunization relations,2599
pallidum. (See *Treponema* p.)
recurrentis. (See *Borrelia* r.)
- Spiroonoura* (p.1870²) *cryptobranchi*, in *Amphiuma*,6716
 in *Terrapene*,6783
Spiroorchidae (Platyhelminthes), p.1870²,6788
Spiroorchis (p.1870²), tax.,6788
Spirostomum (p.1868²), tax.,6763
Spirostreptidae (Myriopoda), p.1873²,5124
Spirostrophus (p.1873²) *remotus*, syn. of *S. nareis*,15999
Spirozoys (p.1870²) *gedoelsti*, syn.,8385
Spirulina (p.1860²), n. sp.,8385
Spirurata (Nematoda), p.1870²,13414
Spiruridae (Nematoda), p.1870²,13414
 Splanchnic nerve. (See *Nerve*, *splanchnic*.)
 Spleen. (See also *Hematopoiesis*; *Splenomegaly*.)
 ablation, effect on:
Bartonella muris infection,632
 fragility of erythrocytes,632
- gonadotrophic hormones,12648
 reimplanted tumors, rats,11282
 in aplastic anemia, path.,5835
 atrophy, in sprue,14988
 blood flow,12643
 measurement,13113, 13114
 blood reservoir, hemolysis and sedimentation reaction,3644
 blood storage in,1988
 depot serum, bactericidal properties,2538
 diseased, autolytic process,11311
 phosphorus in,11312
 dissociation from portal circulation, and use in study of liver cirrhosis,5586
echinococcus cyst rupture in,10513
 effect on erythropoiesis,3653
 enlargement, type of malaria and, Somalland,8686
 erythrocyte life prolongation by,7384
 erythrocyte reservoir during hibernation, bat.,3965
 extracts, proteolytic activity,14451
 function, blood cholesterol and,4254
 hemolytic action, in hemolytic jaundice and anemia,11334
 in hemolytic jaundice, path.,7879
 hypertrophy, in histoplasmosis, in infancy, path.,14867
 implants in fish embryos,8044
 inactivation of estrone by, rat.,14618
 infarctions, in *Pl. cathemerium* infections, canary,17899
 as influenced by:
 ant. pituitary, rat.,3882
 benzedrine, dog,14841
 lactoflavine deficiency,5564
 malaria, monkeys,6747
 mineral oil,16886
 urease, cat.,16796
 vit. A excess,12836
 injury, relation to leucemia,11336
 in kala-azar, histology,673
 reaction,15262
 lipid fraction, effect on blood coagulation in Nieman-Pick's disease,1958
 malpighian follicles, lymphatic tissue in,2429
 multiple necroses, clin. path.,5726
 nerve net, structure in mammals, 15013
 pexis to kidney, effect on hypertension,9524
 phosphatases, acid and alkaline, separation and activation,7276
 pigmentation during starvation, *Rana*,4370
 platelet reducing substance in thrombocytopenic purpura,1995
 puncture, in diagnosis of leucemias,11813
 value in black-water fever,6727
 rate, in school children, Sierra Leone,14185
 reticulo-endothelial system, malignant tumors as affecting, rats,4225
 rhythm, blood flow and,12643, 13114
 role in blood coagulation,11309
 silicosis, path.,14984
 size, blood sedimentation rate and, 7385
 vs. constitutional type, malaria,15967
 tissue culture,15083
 transplantation, effect on lymphosarcoma, mice,13213
 in monkey malaria,12243
 vol., in exptl. fever, dog,7370
 weight, postmortem, at different ages, relation to heart and body wt., exercise as affecting, dogs and rabbits,15008
 x-radiation, control of hemorrhagic disorders by,14468
- Splenic fever. (See *Bacillus anthracis*.)
 Splenomegaly, congestive, production, dogs,9614
 due to intraven. urease inj., cat, 16796
 erythroblastic, during pregnancy, 16664
 in hereditary hemolytic jaundice, 4246
 in Hodgkin's disease,14909
 malarial, iodine-quinine therapy,2665
 in monkey malaria,12243
 sclerosing hypertrophic, autolytic process,11811
- Spodograms. (See *Ash*, *patterns*.)
Spondylosoma blockii, new trematode parasite in,5108
- Sponge(s), development of *Halisarca*, 9792
 history and commercial importance,10531
 in lakes and streams of Indiana, ecology,10770

mite parasitism with,.....3313
 structure of collarette,.....6776
Spongilla (p.1869⁴), dist. in relation to
 Ca, Mg,.....3498
 stancovici,.....10532
Spongillidae (Porifera), p.1869¹
 dist. in relation to calcium, and mag-
 nesium,.....3498
Spongin, amino acid comp.,.....5447
 Spontaneous generation, of bacteria (?),
 10081
 Spore(s). (See also *Pollen*; *Seed*; *Sporo-
 genesis*.)
 bacterial, boiling soda solns., as affect-
 ing,.....990, 2679
 meiosis in formation,.....11789
 resistance mechanism,.....2668
 sensitizing to heat and light by u.v.
 light,.....2754
 steam sterilization, factors affecting,
 11709
 sterilization in water supplies,.....4660
 thermal death points,.....2765
 chemicals toxic to, temp. as affecting,
 Penicillium,.....12110
 ejection, in *Candidobolus*,.....10111
 formation, sugars and auxins as affect-
 ing, *Melanospora*,.....15761
 fungus, conidia as fertilizing body, in
 Neurospora,.....6336
 homology and nuclear history, 17494
 light as affecting, *Fusarium*,.....10321
 of *Mucoraceae*, liberation and dis-
 persal,.....3389
 staining,.....3392
 germination, in *Phragmidium mucro-
 natum*,.....1453
 sources of variability in tests,.....3169
 in *Sphacelotheca cruenta*,.....3113
 in *Tranzschelia*,.....3107
 vitamins as affecting,.....15737
 monosporous isolation technic,.....6690
 production in *Regnellidium* (Fern),
 10164
 secoeco, in *Diplozia*,.....2806
 viability, u.v. as affecting, *Aspergillus*,
 15755
 zoospores, of algae, flagellum structure,
 1586
 of myxomycetes, reactions,.....6361
 temp. reactions,.....1085
Sporidesmium (p.1863³), associated with
 Hysterium karstenii,.....11819
Sporidium (a). (See *Rusts*; *Spore*.)
Sporobolomyces (p.1863⁴), revision of genus
 and key to spp.,.....4637
Sporobolus cryptandrus, in pastures of
 Nebraska, ecology,.....12602
 poiretii, *Dothichloe* on,.....18732
Sporocidia (s), soda soln. as,.....990
SPOROGINEAE (Fungi) (p.1861²),.....6354
Sporogonesis. (See also *Embryo sac*;
 Meiosis; *Microsporogenesis*; *Pol-
 len*; *Spore*.)
 in *Leucocoryne*,.....17554
 macro, in *Lilium philippinense*,.....7104
 Sporophita nigricollis ssp. *vivida*,.....18065
 Sporophyll. (See also *Carpel*; *Flower*;
 Stamen.)
 comparative anatomy and phylogeny,
 2905
 of *Juniperus virginiana*, cyt. and develop-
 ment,.....15523
 macro-, monosporangiate, ovule as,
 Salix,.....11169
Sporopodium (p.1862³), n. spp.,.....10117
SPOROVIBRIO (p.1861¹), N. Gen. (anae-
 robic endospore-forming vibrios), 6320
Sporozoa (Protozoa), p.1868⁴
 Sporulation. (See *Spore*.)
 Spotted fever, Brazilian, *Rickettsia*, tissue
 culture,.....4582
 Rickettsias, agar-slant tissue culture,
 4586, 4603
 Rocky mountain. (See *Rocky mountain
 spotted fever*.)
 Spotted sickness. (See under *Dermatoses*.)
 Spotting. (See under *Hair*; *color*.)
 Spray(s). (See also *Fungicides*; *Insecti-
 cides*; *Spreader*; and spray mix-
 tures, e.g., *Bordeaux mixture*,
 Lime-sulphur.)
 aerial, concentrated, factors in,.....17889
 Bordeaux mixture, dwarfing of cucur-
 bits due to,.....14093
 effect on ripening of tomatoes, 5002
 on transpiration,.....8627
 injury to trees, prevention by MgO,
 10394
 with S and pyrethrum, for potato,
 12197
 chemical, for fruits utilized by wild
 life,.....10816
 for citrus whitefly on gardenias, 12181

Spray (continued)
 for codling moth,.....10397, 10398
 10399, 17856
 copper, effect on fruit set of apple,
 14094
 copper carbonate as,.....8639
 Cu compounds, insoluble, for vegetables,
 3161
 Cu-nicotine-bentonite mixture as, 14149
 cuprous oxide, for roses,.....3160
 demonstrations, control of Jap. beetle,
 12208
 dinitro-o-cresol, dinitro-o-cyclo-hexyl-
 phenol and laural rhodanate,
 on apple,.....12178
 dinitro-o-cyclohexylphenol as,.....14105
 dormant, oil, effect on flower- and leaf-
 bud formation, pear,.....3178
 in Virginia orchards,.....3177
 effect on leaf area,.....17862
 for European pine shoot moth,.....12206
 for harlequin bug,.....12204
 as herbicide, for weeds in cereal crops,
 13836
 pH effects,.....14103
 indoleacetic acid as, effect on growth
 of crop plants,.....13986
 injury to trees, prevention by MgO,
 10394
 insecticide and fungicide, for apple,
 Del.,.....12179
 lead arsenate as, injury to oranges,
 8639
 reactions with lime sulphur,.....3211
 leaf surface as affecting quantity, 5053
 lime sulphur and lead arsenate mix-
 tures,.....3212
 nicotine, activator,.....14148
 for codling moth,.....12175
 quebracho-fixation for,.....17883
 and rotenone as,.....17886
 N-isobutyl amides and,.....5869
 for obscure scale on pecan,.....5020
 oil, as adhesives,.....17889
 and aqueous, deposit,.....3213
 to control European red mite on
 apple,.....15896
 deposit, pH as affecting,.....10460
 factors in,.....10462
 effect on citrus trees,.....10475
 derris, insect pest control,.....14145
 as insecticide, review,.....15932
 ovicidal effect, on *Aedes aegypti*,
 12224
 for red spider mite and aphid, fruit
 trees,.....5015
 wool grease as substitute,.....10468
 petroleum oil as, phytocidal properties,
 1469
 for plum curculio on apple,.....3173
 protective films in control of warehouse
 and storage pests,.....3192
 pyrethrum, for apple insects,.....10400
 and oil, for sand flies in house, 12217
 for removing soot, from apple trees,
 15589
 residue, As on apples and pears, factors
 affecting amt.,.....3179
 composition after weathering,
 12176
 effect on migration codling moth
 larvae,.....14113
 on scale population, citrus,.....5019
 fluorine, on apples, removal methods,
 14111
 tests for, in lima beans,.....8640
 injuries due to, dinitro-o-cyclohexyl-
 phenol,.....14105, 14106
 lead in, retention as affected by apple
 constituents,.....14550
 Pb/As ratio, factors affecting,.....1491
 removal, of Pb arsenate, apples,
 14112
 materials for,.....3169
 Se compounds, on grape and citrus,
 health hazard,.....3176
 substitute materials as affecting,
 3214
 for scurfy scale on apple,.....3174
 skim milk as spreader for,.....3212
 for spruce sawfly,.....12206
 for strawberry leafroller,.....10396
 substitute materials,.....3214
 sulphur for pear blister mite,.....10393
 supplements, vegetable oils as,.....8169
 tar oils, use and skin injury due to,
 12180
 tetramethylthiuram disulfide as,.....12234
 12236
 for tomato leaf miner,.....1500
 wetting agents as affecting,.....3211
 winter, toxicity to eggs, orchard pests,
 10470
 Spraying. (See also *Dusting*.)
 of apples, blooming period as affecting,
 3147

for control of cedar rust,.....17755
 effect on yield,.....3169
 Iowa,.....14097
 Kansas,.....15606
 Nova Scotia,.....10375
 Ohio,.....14092
 prevention of Cu injury,.....3169
 schedule for Connecticut,.....6681
 for Indiana,.....6677
 var. differences in injury,.....6679
 autogiro, advantages,.....14134
 of cauliflower, to control cecidomyids,
 3188
 of cherries, against *Coccomyces*,.....3169
 for leaf spot control,.....3169
 of citrus fruits, for brown rot control,
 15872
 for codling moth, tests with nicotine,
 12175
 electrical charges and potential as af-
 fecting wetting and deposit,
 10471
 for fall cankerworm,.....10425
 of fruit trees, Illinois,.....17832
 Quebec,.....17836, 17839
 of grapefruit,.....14090
 horticultural, cooperation in,.....12472
 of orchard fruits, Ohio,.....14091
 of peaches,.....3149, 3169
 of peach orchards from airplanes, 17830
 of peanuts,.....3169
 of pecans,.....1457, 3145
 of potatoes, effect on yield and quality,
 1211
 of *Prunus serotina*,.....12160
 of roses,.....3154
 of seedlings, for damping off control,
 3152
 standard surface and method for,.....3213
 of tobacco,.....14099
 for control of blue mold,.....1456
 of *Cercospora* spot,.....8629
 of tomatoes,.....3169
 of walnuts,.....1471, 17838
 Spreader(s), in bait, effect on heating,
 5074
 effect on Pb arsenate residue, apples,
 14112
 for fungous spores, corn borer control,
 12229
 skim milk as,.....3212
 Pb arsenate and lime sulfur reactions
 to,.....3211
 for Na arsenite,.....17888
 wetting agent, for aqueous and oil
 sprays,.....3213
 bentonite as,.....3214
 effect on electrical charges and de-
 posit,.....10471
 esters of Na sulfosuccinic acid as,
 substitute materials,.....12231A
 Springs, hot. (See *Waters*, *thermal*.)
 mossy, testaceous rhizopods in, Lapp-
 land,.....10526
 in spread of dracunculitis, India, 14181
 Spruce. (See also *Picea*.)
 damage by *Adelges* attack,.....3198
 by deer,.....15677
 by June beetle, Finland,.....12201
 by wind, Switzerland,.....15633
 by wood wasp, control,.....15926
 fertilization in nurseries,.....17656
 fossil wood, chem. comp.,.....4887
 gall aphid. (See also *Adelges abietis*.)
 host specificity,.....10606
 growing-stock management,.....3018
 natural regeneration in Ontario Clay
 Belt,.....13966
 natural reproduction, Rumania,.....17649
 nursery fertilization,.....13948, 13949
 nutrition, unbalanced N fertilizing as
 affecting,.....1297
 provenience studies, Sweden,.....8525
 sawfly, control,.....10423, 12206, 12209
 enemies of,.....5051
 European, N. E. America,.....14123
 seed, germination expts.,.....13951
 size, relation to growth of seedlings,
 10268
 source and growth,.....1302
 seedling growth, compost as affecting,
 10261
 Semasia on, Swiss Alps,.....15909
 stand density, relation to growth and
 form,.....3039
 thinning as affecting, New Hampshire,
 13955
 types in French Jura,.....125
 as understory, effect on microclimate
 and soil,.....4894
 windfirmness, method of increasing,
 8038
 Sprue. (See also *Stomatitis*.)
 argentaffine cells in, significance, 14930

- Sprue (continued)**
 clinical and hematological study, 11346
 non-tropical, case, 13271
 splenic atrophy and anemia, 14938
 tropical and, relation, 11344
 oral, *Mycotorula albicans* associated, 4636
 vit. C lack in, 2857
Sputum, bacterial examination, flotation method, 966
 blood-group-A in, anti-A-sera as affecting, 934
 in lobar pneumonia, 2537
 nature of mineral particles in silicosis, 2420
 tubercle bacilli in, conc. method, 17353
 diagnostic technic, 8255
 isolation from, 8236
 tuberculous, diagnosis by culture and exam., 15284
 prep. for culture or inoculation, 13628
 statistics on exam., 13632
Squalene, effect on distr. of unsaponifiable substances in body, 13163
Squalus. (See also *Dogfish*.)
 embryology, guide, 9765
 acanthias, phosphate excretion in, 9405, 14672
Squamariaceae (Algae), p.1860⁴
Squamata (Reptilia), p.1880⁴
Squash. (See *Cucurbita*.)
Squash bug. (See *Anasa tristis*.)
Squatula (p.1881²) *squatulora*, distr. habits, 16073
Squatina (p.1871³), n. sp., 6907
Squid. (See *Loligo*; *Sepia*; and other genera.)
 giant axones, axoplasm, electrolytes in, 12643, 16293
 electrical impedance during activity, 12643
 injury potentials, 12643
 membrane resistance at rest, 12643
 gill extracts, carbonic anhydrase in, 7265
Squill. (See *Urginea*.)
 red, prep. and toxicity, 16789
 statistics on rodent extermination by, 3282
Squirrel(s). (See also *Sciurus*; and other genera.)
 David's, influenza virus transmission to, 3808
 endemic typhus susceptibility, 2632
 exptl. echinococcosis in, 12248
 food, bob-white eggs as, 5230
 Haemosporidia in, 6769
 olfactory formations, 9076
 stomach analysis, method of preparing slides of food materials, 14425
Stables, disease, incidence vs. sanitary factors in, 4674
 manure, composts, thermophilic actinomycetes and fungi in, 4703
 nitrates in, detn., 15407
Stachys rigida, note, 2857
Stagnicola palustris elodes, host for n. Cercaria, 12291
Stagonospora (p.1862⁹), n. spp., 17499
 melioli, leafspot and rootrot of forage legumes due to, 8109
 recedens, leafspot of *Trifolium pratense* due to, 3109
Phlebospora trifolii var. r., 8109
Staining. (See also *Dyes*; *Microscopical technique*; and under structure, e.g. Chromosomes, Mitochondria, etc.)
 acetocarmine, for dried pollen grains, 16157
 for acidophilic tissues, 5919
 for bacteria. (See *Bacteriological technique*.)
 basophilic for blood films, 9713
 Bismarck brown, use and schedules, 16116
 for bone marrow with azocarmine, 7999
 brilliant cresyl blue, for malaria parasites, 17921
 dehydration, 5261
 for dermatophytes, 8248
 differential, for cell types in pancreatic islets, 15045
 for chromosomes and nucleolus, 3447
 for nuclei of suprarenal cortical cells, 15042
 of resting and mitotic tumor cells, 7838
 for fat with sudan black B, 714
 Feulgen. (See *Feulgen reaction*.)
 for flagella of bacteria, 2753
 for formalin fixed pituitaries, 15043
 for frozen sections with hematoxylin-eosin, 8002
 for *Fucus*, use of dioxan in, 16122
 for fungous spores, 8392
 Giemsa, modification for *Plasmodium* in tissues, 10491
 for thick malarial smears, 8702
 for haustoria of rust fungi, 15891
 intensity, detn., 9086
 for malarial oocysts, in living mosquitoes, 12268
 Mann and Weigert-Pal, ammonium molybdate as mordant for, 10089
 for mastitis udder tissue, 8323
 for microflora in day blood, 17902
 for microorganisms, 1669
 microorganisms surviving in stained preps., 8270
 for mucin, 715
 mucus solvent, for pneumococcus typing, 17330
 for nerve fibers, Ag method, 7992
 for Nissl substance and yellow pigment of ganglion cells, 9709
 paracarmine, for helminths in feces, 10501
 for pathological tissues, 38
 for permanent root tip squashed preps., 16152
 for plant tissues, 3410
 protargol, technique, 5258
 for protozoan blood parasites, 1584
 quadruple, for connective tissue-muscle relationship, 17002
 for reticulocytes, 7998
 Romanowsky, Puntoni modification, 1055
 for spirochaetes in tissue sections, modified Kanzler, 9989
 Warthin-Starry method modified, 9998
 standardization, present members of the commission on, 16131
 progress in, 16118
 for starch grains, 3451
 supravital, of malaria parasites, 17921
 in monocytic leucemia, 7873
 for tissues in physiological and hypotonic media, 11432
 in tuberculous, 4236
 for thick blood films, malarial, 3702
 for tissues, age as affecting, 37
 rich in K., 16999
 for trematodes, 5259
 triple, for amphibian embryos, 17003
 for unfertilized *Chaetopterus* eggs by neutral red, 176
 vessels for, 16123
 for virus elementary bodies and intramicrobes, 11638
 vital, with berberin sulphate, 15749
 for plant cells, 1864, 3068
 reactions of cells, *Saccharomyces*, with serum, 16151
 for vacuoles by neutral red, contraction due to, onion epidermis, 4951
Polytrichum, 7094
 for wood. (See under *Wood*.)
Stamen. (See also *Pollen*; *Flower*; *Sporophyll*.)
 anther, development in *Urginea*, 11912
Stanleya spp. as indicator plants for seleniumiferous areas of western U. S., 10179, 10776
Staphelia (p.1867³) *peculiaris*, 6418
Staphylinidae (Coleoptera), p.1876¹
Staphylinoides (Coleoptera), p.1876¹
Staphylococci. (See also *Staphylococcus*.)
 acute osteomyelitis due to, specific immunity to, 15164
 source, 4627
 alpha-hemolysin production by, agar as affecting, 4479
 in chemically defined media, 4454
 antagonism to capsulated bacteria, 11803
 antibacterial and non-specific immunity to exp. infections, 15133
 antigenicity, killing temp. as affecting, 17161
 antiserum content of antitoxin vs. bacterial antibody, 9992
 antitoxin, 8154
 antihemolytic, antinecrotic and antilethal activities compared, 9866
 assay as influenced by gamma-hemolysin, 911
 bacteriophage, blood-absorbed, saponin and in vivo reactions, 13409
 intracellular precursor, 13566
 surgical dyes and antiseptics as affecting, 17283
Staphylococci (continued)
 beta-hemolysin, differential separation from other lysins, 910
 titration, 910
 biol. characters, animal vs. human passage as affecting, 17302
 in bronchopneumonia, 3220
 chromogenic variants, 2772
 comparisons of intradermal, agglutinability and in vitro tests for, in chronic infections, 11653, 11671
 cutaneous infection of dogs by, chemotherapy, 15367
 dermonecrotizing action, inflammation as affecting, 13239
 differentiation, 15411
 of pathogenic, by lipase activity, 6181
 dissociation of non-pathogenic, 2772
 encapsulation, 9889
 enterotoxin, chem. and physical studies and in vivo reactions, 13409
 production, 2544
 in etiology of nasal sinusitis, 5823
 filtrates, bacterial protein in, 9892
 detoxification, 4529
 flocculation with toxin and antitoxin, 9892
 gamma-hemolysin, properties and significance, 911
 growth regulators for, 4714
 hemolysin, saline as affecting, 4502
 immunization to, local cutaneous by toxin application, 6081
 as influenced by sulfanilamide, 2654
 sulfapyridine, 2654, 12721
 lesions induced by, histocyte reactions of normal vs. immunized animals in, 13467
 mannitol fermentation by, 6301
 of mouth, lysozyme and inhibin of saliva as affecting, 907
 of osteomyelitis (chronic), antigens and antibodies as influenced by inflammatory tissue, 6058
 pathogenic, monographic review, 15411
 phage precursor within cells, 4595
 phagocytosis vs. growth phases, 9889
 pyogenic forms, granulation tissue resistance to, 2538
 phagocytosis mechanism, 9882
 septicemia, antitoxin therapy, 13492
 diagnosis and antitoxic therapy, 4514
 mortality, age and, 13492
 review, 16901
 serologic grouping, 15411
 by slide agglutination, 4441
 skin-necrotizing factor, saline as affecting, 4502
 standardization of toxin and antitoxin, 9892
 sugar fermentations by, aerobically and anaerobically, 6301
 surface antigen, 9889
 toxicity, killing temp. as affecting, 17161
 toxin, deterioration in saline, 4502
 formal detoxification by adsorption, 13437
 heat effects on hemolytic and skin-necrotizing factors, 4501
 hema., effect on erythrogenesis, rabbit, 5842
 neutralization in tissues by antibodies, conc. factors, 8112
 sinus tract pus and emulsion as affecting, 17151
 unity of hemolytic, necrotic and lethal properties, 9866
 uveal sensitization by synergic action, 6076
 toxoid, 8154
 effect on leucopenic myelogenous leukemia, 643
 prep. of purified, 9842
 of udder, characters and etiological relations, 17393
Staphylococcus (p.1861¹). (See also *Staphylococci*.)
 albus, bactericidal action of blood on, as influenced by vit. B₁, 2516
 by vit. E, 2517
 bacteriophage, aging as affecting, 13571
 corneal ulcers in rabbits induced by, therapeutic agents tested by, 15261
 aureus, as affected by maggot washings (*Calliphora* and *Cynomyia*), 12216
 carbohydrate metabolism, 17452
 chemotherapy of infections, 13544
 in vitro, 13546
 coconut milk media for, 4707

Staphylococcus (continued)

- aureus* (continued)
 dissociation, effect on amino-acid oxidations by,6324
 on optical specificity,6324
 food poisoning by,2651
 pathogenicity, gastric mucin as affecting,8221
 in phagedenic ulcer,6177
 resistance to disinfectants, peptone and,998
 sinusitis of cats and,2646
 sulfapyridine therapy of infections,4549
 toxins, sulfanilamide as affecting,15184
 urea decomp. by,13713
 vaccine, effect on leucopenic myelogenous leucemia,648
citreus, proteinases,15424
pyogenes, serological grouping by slide agglutination,4441
 Staphylotoxin, uveal sensitization by synergic action,6076
 Starch. (See also *Carbohydrates*; *Poly-saccharides*.)
 amount and digestibility, in feeds, 5984
 antigenicity of $Al(OH)_3$ -adsorbed rice- or potato,922
 in cereal and legume seeds, sp. and var. differences,17740
 commercial, from *Cicer arietinum*, 11953
 conversion to paste on heating,12038
 in culture media, as agar substitute,4721
 depletion in timber, methods,3197
 digestion, and absorption rate in intestine, rat,12875
 salivary, inhibition by sublimate,11037
 electrokinetic potential, effect on enzymatic hydrolysis,9087
 euglobulin affinity for,7372
 extraction from arrow root,1181
 from farm products, industrial use,13842
 films made from, physical properties,12021
 grain, impregnation method for staining,8451
 hydrolysis in leaves, relation to leaf fall,4942
 by pancreatic amylase, temp. coefficients,9097
 microscopy, with Spierer lens,12054
 in oak piths, relation to girdling and *Lyctus*,5052
 in potatoes, raw digestibility, man, 3682
 soil pH as affecting,8473
 var. differences,11956
 in root caps, relation to geotropism,4921
 in roots of forage plants, relation to closeness of grazing and survival,17597
 soluble, whey, amylase action on, 1397
 staling, review,1024
 structure, micellar concept,17689
 from sweet potatoes, manufacture,13825
 in timber, quantitative detn.,3197
 Starling, European. (See also *Sturnus vulgaris*.)
 foods, in New York State,13072
 sexual activity, light as affecting,5685, 13031
 Starters, for cheese,1037, 8340
 Starvation. (See *Inanition*.)
 Statistics, of biochemical variables, man,10946
 compendia, tables,10747, 10788
 development and history,8891
 methods. (See also *Biometry*; *Populations* (statistical); *Sampling*.)
 adjustment of ratios,16225
 advantages of "balanced" vs. random arrangements,16213
 for agric. research, book,7172
 analysis of variance,3477
 applicability of Z test to Poisson distr.,1803
 applications in biology,5364
 for biological, agric. and medical research, tables,8968
 books,1807, 1810, 18379
 3479, 7169, 14379
 calculus of variations and logistic curve,10750
 for comparing growth rates,1815
 samples of unequal variances,12616
 contribution to theory of means,7167

- correlation of variables with equal vs. unequal variances,16222
 for detn. of malignancy,11301
 discriminating between specified populations,16228
 discussion,1805
 distribution, of groups in sequence of alternatives,5362
 laws, moment functions applied in study,8972
 of maximum likelihood estimates,16227
 for entomology,3170
 fiducial estimation,8973, 8974
 finding arrangements in incomplete blocks,5361
 in forestry,1295, 8544
 formulae for cumulants of χ distr.,16219
 Gauss' quadratic formula with 12 ordinates,1804
 generalization of z test,1813, 8970
 for genetical data,16217, 16224
 graphic detn. of mode, mean, median, etc.,7173
 for interpreting Mendelian class frequencies,10747, 10749
 for life-history studies with insects,3476
 measurement of rank correlation,1812
 moments of binomial,1814
 properties of normal univariate and bivariate distributions, 3480
 randomness vs. systematic arrangement in design of expts.,16218
 recent advances in,7168
 tests, for goodness of fit,16214
 and significance,1816
 of hypotheses of location and scale parameters,16223
 significance,1806, 1809
 severity index for diabetic coma, 11353
 theory,1819
 variability and error in, book,12563
 vital. (See also *Births*; *Death rate*; *Health*; *Population*; etc.)
 book,4655
 in cancer and heart disease trends,11297
 of carcinoma mortality, Bavaria, 1931,4207
 population growth in relation to,8309
 of Pueblo Indians,15343
 social security needs for records,13654
 value in health work,8284
 in zoology, book,12473
 Statocysts. (See *Otoliths*.)
 Stature. (See *Anthropometry*; *Body, height*.)
 Staurocephalidae (Annelida), p.1871²
Staurotonema (p.1860²) *viride*, plasmodesma absent,8377
Stauroneis (p.1860³), n. spp.,8376
Stauroneris (n.1871²), spp. descr.,1608
 Steam, in control of cheese mite,10420
 sterilization by, factors affecting, 11709
 technic,2765
 Steapsin. (See *Lipase*, under *Enzymes*.)
 Stearate, ethyl dibrom., effect on liver fatty acids,5603
 Steatorrhea, idiopathic, metabolism in,3694
 liver extract and vit. D as affecting,3739
 nicotinic acid as affecting,3731
 relation to sprue,11844
 Steer(s). (See *Cattle, beef*.)
Stegelleta (p.1870⁴) *incisa* (*Stegella*), 17957
Stegomyia. (See also *Aedes*.)
calopus, neurotropic yellow-fever virus development negative in,8142
 Stele. (See also *Root*; *Stem*; *Vascular system*; and parts of stele.)
 anatomy, *Salix*,17559
 Stem(s). (See also anatomical parts, e.g., *Cambium*, *Phloem*, *Vascular system*; *Bud*; *Stele*; *Wood*; *Xylem*; etc.)
 anatomy, comparative, and phylogeny,2905
 ecological, *Artemisia*,4308
 and growth of apex in *Cycas*,11917
Myrmecodia,2916
Ruscus cladode,11924
Salix,17559
Solenostemma,11899
 corms, root formation by, auxins as affecting, gladiolus,1362
 growth rate, temp. as affecting, asparagus,14002
 herbaceous, waste, and ash content,12114
 distr. gradient,12114
 nodal adventitious root, *Salix*,1166

- ontogeny, and histogenesis in seed plants, review,17557
 in *Lycopodium*,6374
 rhizomes, carbohydrate content and food value, *Canna*,2930
 effect on tuber formation, *Helianthus*,1411
 staining, with Bismarck brown,16116
 Stemonitaceae (Myxomycetes), p.1861²
 Stemonitales (Myxomycetes), p.1861²
Stemonitis (p.1861²), *webberi*, reactions of swarm cells,6361
Stenaspisidius (p.1876²) *wagneri*,12850
Stenodontes (p.1876²), n. sp.,6880
Stenobracon (p.1878²) *deesae*, parasite of sugar cane root-borer,1522
nicevillet, parasite of *Scirpophaga*, life hist.,8667
Stenocarpus (p.1865²), in Papuasia, 11833
Stenodontes (p.1876²), n. sp.,6883
Stenoglossa (Mollusca), p.1872²
Stenoloma (p.1863²), syn. of *Sphenomeris*,8421
Stenomylon (p.1864²) *tripartitum* (Cb), redescr., syn.,8368
Stenopelia (p.1875²) *prasina*, larva of, morphology,3363
 Stenosis, of aortic isthmus, heredity, 5721
 calcareous, of aortic valve, electrocardiography,14757
 lymphogranulomatous rectal, Frei-antigen plus auto-urine therapy,17212
 mitral, cyanosis in, etiology,4058
 nonrheumatic calcific aortic,11175
 pyloric, eumydrine as affecting, man,16817
 tricuspid, rheumatic endocarditis and,11176
Stephania (p.1865²), n. sp.,2861
Stephanitis spp. (Hemiptera), as vector of abaca mosaic,6645
Stephanoflarta spp., in domestic animals, Dutch E. Indies,3245
Stephanoprora (p.1869²) *mergi*, in ducks,1590
spinosa, in ducks, Michigan,1591
Stephanostomum (p.1869²) *tense*, life hist.,15986
 Steppes. (See also *Grassland*.)
 of Morocco,9029
 plants, osmotic behavior in relation to habitat,5379
Stereocaulon (p.1862²), n. sp.,15475
 cephalodia, taxonomic and phylogenetic significance,6368
 arcticum,17504
 intermedium, in Alaska,6363
 Stereochemistry. (See *Asymmetry*; *Isomers*; *Isomerism*; *Optical activity*.)
 Stereoisomerism. (See *Isomerism*.)
 STEREOSPHAERIA (Fungi) (p.1861⁴),15453
 Stereotax instrument, for placing stimuli or lesions in brain,12643
Stereum (p.1862²) *fabellatum*, emend.,11820
frustulosum, growth,6337
gausapatum, culture studies, variability,15449
 Sterile Mycelia (Fungi), p.1863²
 Sterility (animal). (See also *Fertility*; *Ovary*; *Reproduction*; etc.)
 due to myoma, man,2360
 genes for, *Drosophila*,16202
 gonadotrophic hormone as affecting,16930
 in mules and other mammalian hybrids,8465
 pituitary irradiation in monkey,202
 self, in *Paramoecium bursaria*,7143
 in vit.-E-low rats,12643
 Sterility (plant). (See also *Fertility*; *Hybrids*; *Pollen*.)
 in castrated and non-castrated flowers, *Taraxacum*,81
 and chromosome pairing, in intra-specific hybrids, *Galgeopsis*, 12507
 due to incompatibilities in homomorphic flowering plants, genetics, review,83
 genetics of ovule abortion, *Oenothera*,16192
 σ , in tomato,8939
 in pears, factors affecting,6523
 pollen, incidence and inheritance, potato,8986
 in *Prunus*, relation to growth of pollen tubes,8507
 self, alleles for, distr. in populations,12516
Oenothera organensis,12523
 in *Antirrhinum* and *Petunia*,5319
 in apple vars.,11995A
 causes, in rye,16175
 in olives,15604

- Sterility (*continued*)
 self (*continued*)
 in pears,15596
 in *Raphanus avium*,11976
 in *Raphanus, Brassica*,10733
 Sterilization (eugenic). (See under *Eugenics*.)
 Sterilization (microbic). (See also *Antiseptics; Disinfectants; Fungicides; Pasteurization*.)
 aerobic bacillus surviving,11800
 of dairy equipment and products, by ultraviolet,15402
 effect on nutritive value of milk,5526
 by formaldehyde vapors, efficacy and technic,15323
 of milk utensils, using steam generator,8074
 of soils. (See under *Soils*.)
 surface, by aerosols,6216
 of surgical dressings, by electric fields,1000
 of thermolabile substances in presence of bactericides,8283
 Sterilization (reproductive). (See *Ovary ablation; Testis ablation*.)
 Sterilizers, dry, testing,987
 electrical, for dairy utensils,1036
 Sterine, color reactions for,12053
 Sterna (p.1881²) *antillarum*, in Iowa, habits,16099
 hirundo, olfactory organ, development,4383
 macrura, activity in Arctic,113
 eggs, number in nest,8850
 sandvicensis, mating during incubation,14307
 vittata, n. spp.,7017
 Sternopychidae (Pisces), p.1879²
 Sternotherus (p.1880³) *derbianus*, ophthalmic placode, development,733
 odoratus, helminth parasites of,6783
 Sternotomiella (p.1876³) *maublancii*,8778
 Sterogyl. (See *Ergosterol, irradiated*.)
 Sterols. (See also specific sterols, e.g., *Cholesterol, Ergosterol*.)
 carcinogenic hydrocarbons and,4182
 chem. activation and configuration,9238, 9239
 cinchol vs. sitosterol vs. stigmasterol,12947
 color reactions,1942, 7316, 9239
 detn., digitonine micro-method,9121
 glucuronides, effect on sex glands, 11251
 in guano,8487
 plant, from *Kalmia polifolia*, chem., 6544
 review,9202
 sex, effect on functional uterine bleeding,5855
 synthesis,3825
 Sterrhurus (p.1868⁴), n. spp.,6803
 Sterrhurus (p.1870⁴), pre-cercarial develop.,12290
 Stichosiphon (p.1860⁴), n. sp.,8385
 Stictidaceae (Fungi), p.1862¹
 Stictocaphala (p.1875⁴) *festina*, life cycle and control,6915A
 Stigeoclonium (p.1860⁴), n. sp.,2789
 Stigma (carpentry). (See *Carpel; Gynecium; Pistil*.)
 Stigmatogaster (p.1873³), n. sp.,6831
 Stigmatopelia senegalensis, tapeworm from,15938
 Stigmella platani-racemosae, culture medium for,17495
 Stigmella platani, culture medium for,17495
 Stigmodera (p.1876²), n. spp.,6872
 Stigonemataceae (Algae), p.1860⁴
 Stilbaceae (Fungi), p.1863²
 Stimulation. (See *Tropisms; specific stimulants, e.g., Electric current; Light; Irritable tissues, e.g., Nerve processes stimulated, e.g., Forcing, Growth, Seed, germination*.)
 Stimulol, in syphilis fever therapy,8186
 Stipa (p.1864⁴), tax.,1158, 2835
 Stipule. (See under *Leaf*.)
 Stizostedion vitreum, hermaphroditism in,3378
 lymphocystis virus disease,11629
 migration, tagging expts.,14420
 Stock. (See *Livestock; Cattle; Goats; Pigs; Sheep*, etc.)
 Stockard, Charles Rupert, biography, 8888
 Stochactis (p.1869⁴), spirocysts, function,14392
 STOLIDOTOCOCCUS (Monocot.) (p.1864⁴)
 new subg. of *Psychococcus*,11864
 Stoma(ta). (See also *Leaf; Transpiration*.)
 distr. in *Pilea* leaf,2826
 index ecol. significance,9027
 rainfall as affecting,4803
 transpiration related to, bean 15747
 movement, factors affecting,8593
 mechanism,10339
 relation to photosynthesis, apparatus and technic,15745
 number per leaf in *Lepidum*,4813
 of *Pinus*, formation, culture medium as affecting,2911
 relation to chromosome number, *Coffea*,12502
 to transpiration, review,1383
 relative humidity gradient, during transpiration,12090
 size, relation to polyploidy,8926
 in sweet corn, relation to drouth resistance,2937
 temp. of water as affecting,4941
 on tobacco leaves, relation to water soaking,15791
 Stomach. (See also *Achylia gastrica; Digestion; Digestive tract; etc.*)
 ablation, retinal changes after, dog,9477
 absorption, of glucose, dog,12904
 studies, technic,12916
 acidity, blood and urinary NaCl after test meal and,12887
 in chronic rheumatoid arthritis, 7507
 control,2114
 in diabetes,12881
 effect on protein absorption,12098
 enterocolitis and,12889
 as influenced by:
 alcohol addiction,2110
 C-avitaminosis, guinea pig,12906
 CO poisoning,12915
 estrogenic hormone,2109
 histamine, significance,12010
 low vit. A as affecting,8754
 in pseudoachylia,9260
 reduction, factors involved,2100
 activity, in hunger and satiety,12901
 antipellagrous function,4260
 bacteriological problems,2640
 carcinoma, acanthosis nigricans and,4226
 arginase activity,9588
 effect on bone marrow,11308
 lack of liver antianemic principle in,3763
 lymphatic dissemination,7845
 metastatic, incidence,7847
 perforated, streptococcal sepsis in,17289
 production with olive oil,7830
 relation to gastritis and dental prosthesis,13228
 Schiff-Auerbach phenomenon and,7870
 structure, metastases and,7822
 changes in hereditary hypochromic anemia,13258
 crop, of domesticated fowl, *Capillaria* lesions in,12263
 desiccated hogs, effect on pernicious anemia,5843
 development in fetus,4382
 disease, pellagra and,4259
 distress, in miners, gastrocniosis (decreased acid),13278
 emptying, osmotic pressure, of test meal as affecting,5588
 epithelioma, transplanted in rabbits,16836
 extract, effect on erythrocyte size of offspring, rats,3961
 function, relation of nutrition to, rat,11035
 gizzard, erosion, chondroitin therapy in chicks,2691
 nutritional lesions in chicks,11730
 glands, permeability to glucose,12643
 spirochaetes in, man and monkey,9962
 hemorrhage, in brain implanted tumors,16883
 relapsing,5590
 hunger motility, as influenced by:
 gall bladder distension,12643
 lung distension, frog,12643
 upper urinary tract distension,12643
 juice, admin. to pregnant mother, effect on erythrocytes of newborn rats,12643
 analysis, test meal for,3767
 artificial, for digestion diagnosis of trichinosis,8706
 comp. secretion rate and,12643
 effect on:
 erythrocytes, in fetus, rat,9619
 pernicious anemia,9616
 protozoan cysts, rat stomach, 8712
 as influenced by helminth extracts,17891
 Stomach (*continued*)
 juice (*continued*)
 as influenced by (*continued*)
 by hypochloremia and alkalosis,12897
 intestinal reaction to,14574
 secretory depressant, in pernicious anemia,13252
 vit. C in,12853, 12856
 lesions, exptl. amebic, dog, cat,10495
 in pernicious anemia,7882
 motility, as influenced by:
 amino acids in small intestine,12643
 brain lesions,9487
 hypothalamic stim.,2099
 protein hydrolytic products in upper small intestine,9270
 splanchnic nerves,7502
 mechanograph study in disease, 14581
 motility and tonus, rectal reflexes and,2103
 mucin, fractionation and effect on bacterial pathogenicity,8221
 mucosa, bitters as affecting,551
 after hypophysectomy in dog hybrids,7968
 salts in, secretion and,5591
 saponin as affecting,12893
 musculature, eumydrine as affecting, man,16817
 nerve net, structure in mammals, 15013
 proventriculus, of duck, nematode ulcers,3246
 pylorus, adenoma, due to *Capillaria*, field mouse,12266
 adenomatous lesion, path., mice, 2372
 hist. changes, relation to Castle's intrinsic factor,2397
 relation to anemia,11318
 secretion, in birds,9254
 concepts and clinical appl.,9263
 conditioned, on acoustic stimuli, ducks,7526
 depressant substance in urine, 12643
 in exogenous pernicious anemia,11307
 in extragastric malignancy,12643
 as influenced by:
 digitalis,553
 drugs,2326
 glucose,12643
 histamine and mecholyl, rat, 11035
 histamine and pilocarpine after fat inhibition,5533
 iron, in hypochromic anemia,634
 low atm. pressures, dog,7513
 Mann-Williamson operation, 2114
 pregnancy urine extracts,12643
 prolan,14613
 saponin,12893
 urine extracts,11030
 in *Necturus*,12643
 urea, glucose and creatinine in after inj.,7377
 tumors produced with folliculin, rabbit,4217
 ulcer. (See under *Ulcers*.)
 Stomach worms. (See genera; i.e., *Grophidium strigosum; Haemonchus contortus*.)
 Stomatitis, avitaminoses and, monkeys,7893, 7894
 epizootic (See *Foot-and-mouth disease*.)
 tropical. (See *Spurc*.)
 vesicular, tissue culture of virus, 15221
 Stomatopoda (Crustacea), p.1874⁴
 Stomatidae (Pisces), p.1879²
 Stomoxys calcitrans, and filariasis,12262
 pyrethrins to kill adults,5073
 in stables, Dutch E. Indies,3245
 recalcitrans, as vector of oriental sore,13639
 Stone. (See *Calculi*.)
 Stone cells, xylan formation in,13789
 Stool. (See *Feces*.)
 Storage. (See also *Food, preservation*.)
 of alfalfa hay, factors affecting,8464
 of alfalfa leaf meal, vit. A loss in, 4426
 of apples,1446
 effect on N metabolism,12095
 on vit. C in,9236
 factors related to,1232
 temp. and gas as affecting,17637
 use of gas in,1262, 11987
 waxing as affecting,13885
 of apple rootstocks, temp. as affecting,10223
 of avocados, factors affecting,13915
 of broccoli,10231
 of celery, changes during, chemical and physical,1281
 fertilizers as affecting,1258
 of cereals, factors affecting,17743

- of cut carnations, factors affecting, 13901
 of dates, temp. as affecting, 1243
 of digitalis leaves, deterioration during, 1323
 of eggs, composition and, 2511, 6022
 fertile, 9823
 paraffin oil and, 2513
 partially sealed, 9824
 of food reserves in plants. (See under *Metabolism (substance), plant.*)
 of fruits, ethylene production and respiration related, 4943
 of hot-house grapes, 10215
 injury to vegetables during, temp. and humidity as affecting, 13898
 of lemons, chemical changes during, 14035
 of mandarins, at low temp., 1273
 of narcissus bulbs, effect of temp. on subsequent forcing, 13892
 of onion bulbs, for seed production, 15601
 of oranges, ventilation as affecting, 10232
 of peaches, temp. as affecting, 17628
 of pears, 6513
 effect on ripening and emanation of volatiles, 15758
 of plant samples containing HCN, 1316
 of potatoes, effect on tyrosine content, 12115
 as influenced by:
 cold, 2949
 temp., 10322
 waxing, 13813
 of reducing sugars, in strawberry plants, 15762
 of seed. (See under *Seed.*)
 of *Sorbus* fruit, temp. as affecting, 1390
 of strawberry plants, temp. and fumigation as affecting, 13880
 of strawberries, temp. for canning, 10226
 of sugar beets, temp. and humidity as affecting, 6468
 of tropical fruits and vegetables, book, 3009
Storeus (p.1876³) *gibber*, 8779
 Stork, population in 1896, 16091
 Stovarsol. (See *Acetarsone.*)
 Strabismus, treatment, book, 11133
 Stramonium. (See *Datura stramonium.*)
 Strand. (See *Littoral.*)
 Strangles. (See *Streptococcus equi.*)
 Stratiomyidae (Diptera), p.1877³
 Straw. (See also *Mulch.*)
 effect on nutrient value of manure, 1544
 Strawberry, culture and variety trials, 15592
 diseases, North Carolina, 15889
 Oregon, 15893
 disinfection, 13656
 fertilizers for, 1277
 handling and shipping without refrigeration, 8496
 hardness, Ohio vars., 8500
 insect pests, Oregon, 15895
 lead arsenate for white grub, 10392
 leaf spot, due to *Cercospora* n. sp., 3169
 to *Mycosphaerella* n. sp., 3169
 leafroller, control, 10396
 New Jersey, 6661
 Northstar, origin and qualities, 4869
 red stele disease, etiology, 2795
 root aphid, nature and damage, 1489
 root and crown development, factors affecting, 15615
 seedlings, plant/row tests, 4872
 Na and fertilizers as affecting, 13891
 storage, of plants, temp. and fumigation as affecting, 13880
 of sugars in, 15762
 temp., for canning, 10226
Tylocladia fragariae on, life hist. and control, 15897
 yellows, origin, 15592
 yield, spacing as affecting, 1233
 Strawberry crown borer. (See *Tylocladia fragariae.*)
 Strawberry leaf roller. (See *Ancyliis comptana.*)
 Streams. (See also *Canals; Water pollution.*)
 bottom fauna and growth studies of, 14421
 chem. and water temp. in relation to phanerogam flora, Germany, 14394
 detn. of food grade, 14416
 dist. of fresh water sponges in relation to Ca, Mg, Wisconsin, 3496
 effect on snail distr., 12261
 estuary of Mersey, intertidal fauna, 1827
 fish populations, analysis, Michigan, 5401
 in forests areas, erosion control, 9037
 growth of buffalo-fish in, Wisconsin, 9053
 of Indiana, sponge populations, 10770
 of Kashmir and Indian Tibet, fish, ecology, 7223
 movement of fish in, tagging expts., 14405
 plant communities, 7212
 pollution, by acid waste, aquatic life in, 14399
 of southeastern Michigan, glacial history, 104
 Spree, analysis of water, 14400
 temp., effect on trout growth, 10807
 trout, bottom fauna for, 14422
 management, 14407
 productivity and, book, 7239
 trout planting in, method, 10809, 14410
 Ybbs, physical, chemical and biological survey, 10801
 Streblidae (Diptera), p.1878¹
Streptocladia (p.1860³) *corymbifera* (*Hutchinsia* c.), 4729
 Strepsiptera, p.1876⁴
Streptanthus (p.1865³), n. spp., 2871
Streptelasma (p.1869⁴), n. sp. (D), 10535
Streptobacillus, *Ducrey*'s. (See *Hemophilus ducreyi.*)
Streptobacillus moniliformis, associated pleuropneumonia-like organisms as variants, 13693
multiformis, L-forms in cultures, nature and significance, 2756
 Streptobacteria, in cheese from milk of silage-fed cows, 6291
Streptobacterium plantarum. (See also *Lactobacillus* p.)
 in leaven, effect on rye bread, 10061
 Streptococci. (See also *Streptococcus.*)
 acidogenic, in dental caries, 2644
 of acute appendicitis, serological strains, 880
 of acute tonsillitis, virulence vs. laboratory tests, 6179
 in agranulocytosis serotherapy, 4446
 alpha-type, in food-poisoning outbreak, 9960
 anaerobic, liquid in blood media as affecting, 9991
 antisera, in poliomyelitis diagnosis and therapy, 17195
 antiserum-chemotherapy synergy for, 8185
 antistreptolysin reactions, nature, technique and epidemiological applications, 13425
 beta hemolytic, in bovine udder, significance of human strains, 1016
 chemotherapy of infections, 13544
 serological grouping, 8238
 serological types in scarlatina, 8245
 sulfanilamide inhibition, cultured tissue fragments as affecting, 11591
 in bovine abortion etiology, 15364
 of bovine mastitis, agglutinability, 8242
 sulfanilamide as affecting, 15372
 bovine mastitis group II, serological differentiation and relationships, 11797
 in bronchopneumonia, 8220
 butter (fresh) aroma due to, 8336
 in cheese from milk of silage-fed cows, 8291
 chemotherapy of infections, 13545
 in children, alone and with serotherapy, 15198
 chemotherapy in vitro, 13546
 comparisons of intradermal, agglutinability and in vitro tests for, in chronic infections, 11653, 11671
 differentiation, by biochem. properties, 9961
 dissociation, sulfanilamide and prontosil as affecting, 6154
 double-zone-beta-hemolytic, cultural characters, serological grouping, occurrence and pathogenic significance, 6180
 mastitis of cows due to, 6180
 enteric, phage absorption by sensitized, 8214
 enterococcal types of K. Meyer, serological comparisons, 6101
 in etiology of nasal sinusitis, 5823
 fibrinolytic tests, oxalated plasma preservation for, 15155
 focal infections by, rheumatoid arthritis, 4610
Streptococci (continued)
 hemolysins, cholesterol as affecting, 17150
 hemolytic, antifibrinolysin differences in, 4488
 antigenic structure of Lancefield group-A, 17232
 antisera, prep. of potent, 4474
 of type-specific, 8234
 bacteriostatic action of sulfanilamide inhibited by fraction of groups A and C, 15213
 in blood as influenced by fever temp., 815
 by sulfanilamide, 17263
 capsules present only in young, 4474
 chemotaxis of leucocytes to, antibodies as affecting, 13407
 chemotherapy, 13552, 15273
 differentiation of pathogenic strains, 6193
 dissociative phenomena in, 2540
 endocarditis exp. induced in dogs by, 9958
 erythrogenic toxin of NY5 strain, isolation and conc., 17207
 fate in shed blood and sera, 8115
 fibrinolysin-antifibrinolysin quantitative relations, 4481, 4487
 specificity for human fibrinogen and nature of action, 9857
 fibrinolytic activity of exudates as influenced by sulfanilamide, 11600
 of scarlatina, 4519
 food poisoning by, 8292
 growth factors for, 17474
 group-A, serological typing, 8234
 type- and group-substances in S cultures of beta-, 2540
 type-specific substance, antigenic properties of strains, 6057
 types in American vs. German strains, 9849
 Ward-Rudd cultural vs. Lancefield precipitin tests for, 4710
 group-C, insulin and phlorhizin effect on infections by, 9936
 group-specific substances and biochem. and cultural characters, correlations, 2541
 growth regulators for, 4714
 immunologic effects of virulent vs. avirulent, 4429
 incidence in scarlatina epidemic, 15315
 infections, convalescent-serum, 11545
 therapy, 4562
 prontosil therapy, 4566
 sulfanilamide therapy, 4569, 4573
 sulfonamide therapy, 4565
 as influenced by CO₂ in blood or serum, 8115
 by sulfanilamide, alone and plus serotherapy, 17281
 intertransformability of beta groups, 2768
 invasiveness, capsular substance role in, 4474
 of milk, 4699
 negative chemotropism of leucocytes and, rabbits, 6819
 in nose and throat cultures, double poured blood plates for exam., 8271
 nucleoprotein components of Lancefield Group-A, properties and enzymatic changes, 15167
 oxidation-reduction potentials, sulfanilamide compounds and, 6157
 pantothenic acid as growth factor for Dochez NY5 strain, 17472
 pathogenesis mechanism, 4519
 pathogenicity, gastric mucin as affecting, 8221
 peroxide formation negative in group-A type-III, 15278
 peroxide and hemolysin production by, non-hemolytic variants of group-A and, 15260
 in phagedenic ulcer, 6177
 polysaccharides, extraction by formamide, 9988
 from mucoid substance, serological properties, 4475
 scarlatina immunization by purified erythrogenic toxins, 17173
 from scarlatina, serological strains, 831, 8243
 scarlatinal, serological and biochem. study of strains, 6193
 toxin titer, 4519

- Streptococci (continued)**
 hemolytic (continued)
 septicemia due to after a burn, sulfanilamide vs. convalescent scarlatina serum as affecting, 9855
 serological grouping by precipitin test, 4437
 streptolysins and antibodies to, 4520
 of groups and types serologically compared, 1708
 sulfanilamide bacteriostasis in vitro, 11599
 sulfanilamide effects on beta strains, 2667
 on electrode potential of cultures, 6139
 toxic serum extract, antigenic and synergistic action, 11559
 types in scarlatina vs. throats of school children, 6176
 virulence of capsulated vs. non-capsulated, 8234
 immunization to, histological changes during, 4492
 infections by, chemotherapy, 811
 epidemiology, 8238, 8234
 sulfanilamide therapy, 13178
 as influenced by:
 -4'-diaminodiphenylsulfone, 543
 drugs and temp., 13178
 sulfanilamide, 2654, 2656
 8182, 9919, 17280
 sulfapyridine, 2654, 17271
 sulfones, 17262
 intestinal, lecithin-soap therapy, 4563
 labile antigens, 13456
 lactic acid, kefir powder and "Kefermon" as affecting, 4700
 vit. C synthesis by, 2734
 local cutaneous therapy of anthrax by, 8100
 lysins, serological varieties, 918
 lysis by soluble agent from soil bacillus, 6160
 mannitol fermentation by, 6801
 of mastitis, Hotis test for, 15404, 17408
 incidence in milk, 17413
 mastitis due to, caused by non-hemolytic, 15871
 sulfanilamide therapy, 1018
 of mouth, lysozyme and inhibin of saliva as affecting, 907
 non-exotoxic, isolation and testing of pathogenic types, 6182
 oral strains, serological comparisons, 2647
 pathogenic, glutamine requirements, 8361
 in perforated gastric carcinoma, 17289
 pneumococcus differentiation from, 13627
 pyogenic forms, granulation tissue resistance to, 2588
 "Sarcina" infected beer due to, 3836
 scarlatinal, comparisons, 8238, 8234
 serological types, 8243, 8245
 toxin flocculation with antitoxin, 13415
 vaccination by toxin, serological effects, 9891
 in surgical infections, chemotherapy by sulphonamide compounds, 4553
 spp. and serological groups, 916
 toxin, hema-, effect on erythrocytes, rabbit, 5342
 udder, abnormal milk from cows free of, 3839
 vaccines, lability, 13456
 in respiratory infections, 4508
Streptococcus (p.1861¹). (See also *Streptococci*)
agalactiae. (See also *S. mastitidis*; *Mastitis*)
 culture methods for, in mastitis diagnosis, 11781
 identification, rapid method, 11726
 mastitis relations, 11749
 selective media for, 6277-6283
durans, in milk, 4699
epidemicus, growth factors for, 17474
equi. (See also *Strangles*)
 colony types compared, 13668
 morph. cultural and biol. characters of colony types, 6322
faecalis. (See *Enterococcus*)
 hemolytic, chemical and serological studies, blood group-A substance in media not vitiating, 17232
 glutamine requirements, 8861
 sinusitis of cats and, 2646
 from surgical conditions, serological groups, 916
- Streptococcus (continued)**
lactis. (See also *Bacillus lactis acid.*)
 adaptive enzyme formation by, physiological youth rôle in, 6306
 growth factors for, 17470
 inhibitory principle in butter cultures for, 11782
mastitidis, as affected by maggot washings (*Calliphora* and *Cynomya*), 12216
 in milk, 4699
 type-specific antibodies in sera of infected cows, 4550
pyogenes. (See also *S. epidemicus*; *S. hemolyticus*)
 chemical and serological properties and enzymatic changes in, 17222
 infections in relation to types, 4490
 as influenced by sulfanilamide, 15190
 by sulfapyridine, 15190
 nucleoproteins, chemical and serological properties, 12643
 and enzymatic changes in, 17222
 polyvalent antibacterial serum for, 4490
 serological typing, 4490
rheumaticus, growth, factors influencing, 13706
thermophilus, in Swiss cheese starter cultures, factors influencing, 1037
varians, photosynthetic quotient, 13714
viridans, detection of blood-agar colonies, by dried bile, 11657
 effect of bactericides in broth and fibrin masses, 483
 exp. endocarditis lenta induced by, 9970
 hemolytic streptococcus variants resembling, 15260
 immunization against, heterologous allergy and Arthus phenomenon in different stages, 17162
 as influenced by sulphonamide compounds in vitro, 4550
 by tri-lactic acid, 2653
 from surgical conditions, serological groups, 916
zymogenes, incidence in intestines of cow and horse, 8342
 in milk, 4699
Streptolysin. (See also *Antistreptolysin*)
 and antibodies to, 4520
 cholesterol as affecting, 17150
 differences in, 4488
 of hemolytic streptococci, serol. comparisons, 17208
 serological varieties, 918
Streptopelia (p.1881¹) *t. turtur*, habits, in Switzerland, 8848
Streptothrix leproides, complement-fixing fraction of tubercle bacillus vs., 9830
 Stridulation. (See under *Insecta*)
Striga (p.1867²), spp. in Papua, 11895
 Strigidae (Platyhelminthes), p.1870²
 Strigidae (Aves), p.1881³
 Strigiformes (Aves), p.1881³. (See also *Owls*)
Strix (p.1881³), banding, 14296
aluco, cannibalism, 5177
varia, food habits, 3536
 Strobilus. (See also *Carpel*; *Flower*; *Sporophyll*)
 Stroboscope, simple style, 14314
 for study of insect flight, 8762, 10576
 Stroke. (See also *Shock*)
 heat, in Iran, rabbit, 5532
 sun-, CO₂ shortage as affecting, 1389
 Stromateidae (Pisces), p.1879⁴
Stromatum (p.1878³) *fulvum*, introduced into Calif. from Italy, 8651
longicorne, in furniture Java, 14130
 Stromatoporoidea, p.1869⁴
 Strongylata (Nematoda), p.1870²
 Strongylidae (Nematoda), p.1870²
 larvae, longevity on pasture, 15973
STRONGYLOCARYUM (Dicot.) (p.1864⁴), 10121
Strongylocoris (p.1875³), n. spp., 12878
Strongylocotes (p.1875³), n. spp., Brazil, 3869
Strongyloides (p.1870²), in dog, Mass., 10479
 in *Hydropterus*, 1604
 immunity to, nature and mechanism, 15176
cantis, synonymy, 10479
ratti, differences between homogenic and heterogenic lines, 17953
 homogenic, heterogenic progeny of, seasonal variation, 15959
 immunity to, specificity, 6180
- stercoralis*, immunity to, specificity, 6180
 incidence, Cuba, 6720
 infection, review, 3244
 synonymy, 10479
westi, in foals, 17890
 Strongiloididae (Nematoda), p.1870²
Strongyloleura, n. sp., 6896
 Strongylosis, exptl. and clinical, 3241
 in foals, natural factors controlling, 17890
 of horses, Brazil, 1565
 in ruminants, control, 15947
 Strongylosomidae (Myriopoda), p.1873²
Strongyluris (p.1870²) *meridionalis*, from *Gonycephalus*, 14216
Strongylus spp., rate of egg production, 1543
vulgaris, culture technic, 15974, 15975
 in horses, pH and cH of cecum and, 10512
 larvae, in horse aneurysm, 1565
 sex, pH of culture as affecting, 15975
 Strontium, activity, in amino acid soln., 14483
 effect on bronchi, 14791
 on diuresis due to Na₂SO₄, 16648
 pharm., 7747
 with rickets-producing diet, effect on bones, 13272
 Strophanthidin, cumulation, 5772
 potency, 513
 Strophanthin, bioassay vs. chemical assay, effect on:
 acetylcholine in heart muscle, frog and cat, 16787
 coronary circulation, 3777
 electrocardiogram, man, 11193
 enzymatic breakdown of phospho-creatine, 402
 heart, 400, 7726, 11777
 urea as affecting, 7768
 O₂ utilization and total Hb, 7362
 sensitivity of heart to acetylcholine, 401
 enteral absorption, cat, 9570
 sensitivity to, blood Ca level and, 4114
 sugar component, cardiac activity and, 5772
 Strophanthosid, cumulation, 5772
 K⁺ effect on tortoise ventricle, 4079
Strophanthus preussii, note, 15496
Struthio (p.1881³) *camelus*, internal ear, anatomy, 7931
 Struthionidae (Aves), p.1881³
 Struthioniformes (Aves), p.1881³
Struthiopteris (p.1868²), n. combs., 4757
 Strychnine, derivatives, effect on glutathione in liver, spleen and blood, rabbit, 16754
 detection in cadaver, 5787
 effect on:
 acetylcholine in central nervous system, 13001
 brain metabolism, 4138
 cardiac effects of low atm. pressure, 479
 cholinesterase, 14661
Daphnia magna, mechanism, 4161
 emotional mimetic functions of hypothalamus, cat, 2824
 muscle-nerve prep., frog, 7777
 narcotic activity, 16765
 nervous system, 4016
 insects, 9562
 superior cervical sympathetic ganglion and on muscle, 11081
 visual cortex electrogram, 2230
 iodoethyl-, effect on glutathione in tissues, rabbit, 16754
 synergism with atropine, 5769
 with physostigmine, on blood sugar, 526
 use in cerebral cortical localization, rabbits, 5867
Strychnos (p.1866⁴), alkaloids of, 4903
innocua, syn. and distr., 13752
STUARTWELLESCHINUS (Echin.) (p.1871³) (Cb), 10555
 Students, medical, allergy and, 15147
 pulmonary tuberculosis incidence in, 11710
Stultitia (p.1867²) *conjuncta*, 1145
 Stumpknocker, parasites, Florida, 15948
 Surgeon, seasonal response to low temp., 16282
Sturmia propoparcis, parasite of *Protoparce*, 5035
Sturmella neglecta, *Giardia* in, 6773
 Sturnidae (Aves), p.1882³
STURNIOPS (p.1882³) *mordax*, 7041
Sturnus (p.1882³) *vulgaris*, coccidium from, 3271
 cyclic changes in thyroid and adrenal cortex, ♂♂, 2157
vulgaris, bird banding, 14296

- Stuttering. (See under Speech.)
- Styela partita*, *Doroppygus* (copepod) commensal in, 8752
- Style. (See *Carpel*; *Gynoeceum*; *Pistil*; *Pollen*; *Pollination*.)
- Stylochidae (Platyhelminthes), p.1869²
- Stylochoplana* (p.1869²), n. combs., 10540
- of east coast N. America, 6798
- Stylocheus* (p.1869²), syn. and n. combs., 10540
- of east coast N. America, 6798
- Stylommatophora (Mollusca), p.1872²
- Stylomychia* (p.1868²) *mytilus*, reorganization in inanition, 3259
- Stylopaga*, n. spp., 6341
- Styloporization. (See *Parasitism*.)
- Styphlodora* (p.1870¹), tax., 17930
- Styracaceae (Dicotyledones), p.1866⁴
- Styracitol, bacterial utilization, 2757
- metabolism, 10980
- Styrax*, floral development and relationships, 4805
- in Solomon Islands, 11898
- Styryl 430, effect on growth of tumors in mice, 584
- Suaeda asphalatica*, root system, 10780
- Suberization. (See also *Cork*.)
- in potato tuber, microchemical study, 6669
- Submaxillary glands. (See under *Salivary glands*.)
- Submaxillary-gland virus, of guinea pig, pathogenicity and cytol. reactions, 13579
- Subterranean. (See *Cave*; *Insects*; *Soil*.)
- Subthalamus. (See under *Brain*.)
- Subulura* (p.1870²) *brumpti*, life history, 10478
- forcipata*, from quail, 10546
- Subuluridae (Nematoda), p.1870²
- Succession, concept, 9010
- animal, of insects in decaying pine and oak stumps, 10773
- plant, in Alaska, 7191
- on Black soils of Germany, pollen analysis, 7188
- in bog, Michigan, 119
- pollen analysis, 16258
- pollen profile, Indiana, 1844
- of bryophytic communities on trees and boulders, Ireland, 16269
- of communities, France, 5380
- Hungary, 7202
- of diatom spp. in Bristol Channel, 10797
- on eroded sand, 181
- after forest fires, 15925, 15643
- forest, in Adirondacks, deer browsing as factor, 1300
- of broad-leaf, Sweden, 7203
- on grazed farm land, Indiana, 18964
- of longleaf pine, protected from fires, 7195
- on moors of Germany, pollen analysis, 123
- pollen analysis, Indiana, 1843
- in western Germany, 7196
- fossil pollen study of Kokomo bog, Indiana, 1839
- in German moors, pollen analysis, 9026
- on granite rock, North Carolina, 12594
- of grasses, on abandoned farm lands, Nebraska, 10783
- perennial, relation to drought, 9038
- on prairie and pastures, clipping as affecting, quadrat study, 12601
- grassland, burning and grazing as affecting, 9014
- of ground cover after conifer planting, Denmark, 5382
- in Jügersburg moor, pollen analysis, 123
- in moors west of Steigerwald, pollen analysis, 12605
- under pine after litter removal, 9036
- pollen analysis, Connecticut, 16255
- postglacial, in bogs, New York, 7205
- of Washington, pollen analysis, 7193
- of Idaho, 9016
- of Wisconsin, 12589
- in raised bogs, pollen analysis, 16257
- in Reelfoot Lake, Tennessee, 10781
- on scoria buttes, North Dakota, 7197
- in swamp, pollen analysis, Indiana, 1843
- in vernal pools, 7211
- of weedy plants on abandoned fields, Idaho, 5385
- on acid arable soils, 16260
- Succinate, oxidation in tissues, bacterial toxins as affecting, 288
- Succinic acid, antiketogenic activity, in diabetes, 9650
- diamino peptide, hydrolysis, 12678
- effect on pituitary ketonuria, 398
- endo-, derived from polycyclic hydrocarbons, hemolytic action, 7393
- oxidation by muscle juice, 7673
- S-cysteine, chem., 5461
- SUCCINOTETRIX (Orthopteroides) (p.1875²) chopardi, 6940
- Succulents, acid metabolism in, Crassulaceae, 15769
- role of citric acid in, 8582
- form, in relation to heat economy, 12568
- glossary of terms, 12
- xeric, of Judaea, water economy, 12584
- Suckings. (See *Infants*; *Parent-offspring relationship*; etc.)
- Sucrose. (See also *Sugar*.)
- detection when added to watered milk, 8075
- dextran produced from, by bacteria, 6319
- by *Betabacterium vermiciforme*, 6802
- effect on aggregation of tadpoles in light, 7615
- on intracranial pressure, 2330
- gel formation with tobacco juice, 17745
- ingestion, exercise as affecting metabolism after, 277
- intravenously, effect on circulatory system, 11174
- inversion by HCl, velocity coefficient, 12664
- isotonic conc., detn., 5435
- loss in sugar beets in storage, 6468
- muscle permeability to, frog, 10840
- protection of vit. C in fruit juice by, 5571
- synthesis in leaves, factors affecting, 17720
- Suction force. (See also *Osmotic pressure*; *Transpiration*.)
- Suctorina (Protozoa), p.1868⁴
- † *Suevolytia* (p.1874⁴), n. nom. (J), 15943
- Sugar(s). (See also *Carbohydrates*; *Fermentation*; *Glycolysis*; and under specific sugars, e.g., *Glucose*.)
- absorption in intestine, factors affecting, frog, 16565
- from large intestine, 12880
- acetylhexosamine in brain, 9164
- alcohols, bacterial utilization, 2757
- detn., 1939
- oxidation, culture media for, 11771
- aldose, detn. by alkaline iodine, 12726
- in alfalfa, relation to hardness, 15772
- bacterial decomposition, adaptive enzyme formation vs. physiological youth, 6306
- in blood. (See *Blood*, *sugar*.)
- in bluegrass, effect on hardness, 14023
- cataractogenic activity, 12774
- changes in celery in storage, fertilizers as affecting, 1258
- citric acid formation by molds from, mechanism, 11766
- conversion and translocation, in sugar beet leaves, 12089
- effect on:
- acetylcholine synthesis in ganglia, 16642
- growth, excised tomato roots, 10316
- metabolism of new-born infants, 563
- phosphorylase activity, 5451
- motility, algal cells, 6600
- prunase action on HCN, 12104
- root growth, *Lemna*, 3575
- rooting of cuttings, 11991
- excretion, by *Impatiens sultani*, 17739
- fat formation from, by *Endomyces vernalis*, 8334
- fermentation by staphylococci, aerobic and anaerobic, 6301
- in glycoprotein, detn., 16356
- in grapes, as index to maturity, 1235
- hexoses, fermentation by yeasts, glycolysis and synthesis and, 4690
- oxidation and reduction products, effect on proteolysis of liver sections, 9091
- H₂ production from, by *Escherichia coli*, 17463
- interaction with amino acids, time factor in, 7418
- in *Kalmia polifolia*, 6544
- in leaf extracts, clarification method of detn., 3100
- liver min.-vol. uptake and output, 3766
- metabolism, calorimetric study, 12643
- and changes, leaves, 8583
- of fructosan in barley, minerals as affecting, 8584
- sorbitol and mannitol, dog and rat, 3691
- micro-detn., in plant extracts, technic, 1413
- mixtures, analysis, 16386
- monoses, erythrocyte permeability, 3553
- in peaches, storage temp. as affecting, 17628
- phosphatase and, in ice cream, 13564
- in plant tissues, detn. methods compared, 15789
- polysaccharides and, book, 10984
- in potatoes, storage temp. as affecting, 10322
- production in sugar beet, relation to structure and physiology of leaves, 6488
- refinery, *Plectridium spumarium* from scum in, 13673
- related to daily variations in water content of leaves, *Thymus*, 12092
- in root extracts, ceric sulphate method of detn., 15784
- in seed, changes during drying, 10813
- in sorghum, 6488
- storage and amount, in strawberries, 15762
- in sugarbeets and mangolds, in different organs and periods of the day, 5586
- in sugarcane, changes after cutting, 13832
- industry and history, S. Africa, 13805
- tolerance. (See also *Carbohydrate tolerance*; *Glucose tolerance*.)
- in depancreatized dog, glucose vs. sucrose, 12855
- in diabetic strain of rats, 3807
- vit. B as affecting, 3720
- in urine. (See *Urine*, *sugar*.)
- utilization, strength of oxidation of ethanol and, rat, 14476
- wood-, butyl alcohol fermentation, 11770
- Sugar beet(s). (See also *Beet*.)
- absorption of Na and K by, 17583
- breeding, statistical problems, 1757
- clover as alternate crop for, 2954
- composition and feed value, K and P as affecting, 6466
- crown rot, due to *Macrophomina phaseoli*, 12128
- curly top, resistance, present status, 1432
- U. S. vars. compared, 6477
- virus properties, 1482
- virus in root tips, 1482
- damping off, control, 1482
- dry rot (*Rhizoctonia solani*), mutant form in, 6671
- physiologic specialization and infection conditions, 17752
- fertilizer for, tonnage vs. sugar vars., 13815
- U. S. S. R., 6470
- hybrids, Kuhn x Mangold, F₁'s and F₂'s, 14357
- with wild beet, for resistance to *Cercospora*, 12539
- industry, review, 1740
- as influenced by:
- B, 13841
- N fertilizers, 6463
- N and K, 6464
- soil structure, 6469
- soil temp., 2936
- insect pests on, fungus parasite, 8665
- leaves, morph., physiol., and relation to disease, 6488
- mosaic, virus migration in, 1482
- ripening, N as affecting, 6465
- root composition, nitrate as affecting, 15532
- seed disinfection, moisture content as affecting, 3169
- silage, as pig feed, 11485
- spacing, England, 15549
- sucrose loss in storage, temp. and humidity as affecting, 6468
- sugar in, date of seeding as affecting, 17574
- in different organs and times of day, 8586
- in leaves, conversion and translocation, 12089
- tetraploid, induced by colchicine, 14363
- yellow (virus), environmental relations and insect vectors, 15829
- insect vectors, 14068
- and factors in symptom expression, 6657
- N relations in, 6648
- yield, spacing as affecting, 15540

- Sugar beet leaf hopper. (See *Eutettix tenellus*.)
- Sugarcane, breeding and industry, S. Africa, 13805
- chlorotic streak, suspected virosis, 17775
- symptoms and dist., 12132
- culture, Argentina, 6460
- relation to salt content of irrigation water, 4835
- in Brazil, 6457
- deterioration after harvesting, 13832
- diseases, in Hawaii, 3165
- resistance tests in U. S. A., 12159
- fat and wax content, vars. compared and N fertilizer as affecting, 17577
- fermentation and gum formation in, after freezing, 17578
- Fiji disease (virus), *Perkinsiella vastatrix* as vector, 15828
- resistance of POJ 2878 to, 15828
- freezing injury, windrowing as affecting, 17586
- frog-hopper on, control, 14147
- germination of cuttings, root emergence, 1214
- grass mealy bug (*Antonina*) on, Hawaii, 3186
- H 109, culture and optimum yield conditions, Hawaii, 2923
- as influenced by:
- frost, 10184
- lack of P., 1192
- sunlight, 1187
- insect pests, control by parasitic insects, P. R., 8669
- juice, in therapy of nutritional anemia, infants, 13194
- mosaic, identification of viruses by immuno-reactions, 3169
- insect vectors, 15832
- N fertilizers for, filter cake as, 2922
- N utilization, 10182
- P. O. J. 86 and 213, value and sugar content, 6452
- Pyrenochaeta* on, 11811
- root stock weevil disease, 5037
- sooty molds, in Formosa, 1429
- specific gravity, in different spp. and parts of stem, 4836
- stem galls, induced by injection of leaf hopper extract, 4985
- varieties, modern, nomenclature, 1179
- resistant to beetle, La., 12195
- in S. Africa, recent changes in, 1184
- variety tests, India, 2957
- and drought relations, Argentina, 6461
- water-rat damage to, Guiana, 8459
- wilt (*Cephalosporium*), identity of pathogen, 1427
- yield, gaps in rows as affecting, 15527
- Sugar cane borer. (See *Diatraea saccharalis*.)
- Sugar cane root borer. (See *Emmalocera depressella*.)
- Sugar cane white moth borer. (See *Scirpophaga auriflua*.)
- Sugi. (See *Cryptomeria japonica*.)
- Suida*, n. syn., 1158
- Suidae* (Mammalia), p. 1883.
- Suipestifer-paratyphoid group of bacteria. (See under *Salmonella*.)
- Sula* (p. 1881), new subsp., 1651
- basiana*, breeding census, 163, 168, 169
- Sulfamide, central nervous system retention, 13548
- para-aminophenyl- effect on tubercle bacilli, 11608, 11604
- placental passage, 13538
- suboccipital inj., effects, dog, 14835
- in tropical diseases, 17243
- Sulfanilamide. (See also *Prontosil*; *Sulfonamide*.)
- acetyl-, absorption, excretion and toxicity, 9983
- chemotherapeutic value, 9983
- acetyl- and, distr. between cells and extracellular fluid, 7383
- excretion in human milk, 1493
- addition compounds with cinchonalkaloids, chemotherapeutic value, 13552
- agranulocytosis due to, 11598, 16432
- and death in bacterial endocarditis therapy by, 11605
- anemia induced by, 15202
- anticatalase activity, 538
- of related compounds and, 2662
- antileucocytic power, 15190
- antiserum therapy, of hemolytic streptococcus infections, 4569
- bacteriostatic action, 6237
- on bacterial broth cultures, 2654
- Sulfanilamide (continued)
- bacteriostatic (continued)
- on hemolytic streptococci in vitro, 11599
- in vitro, inhibition by streptococcus fraction, 15213
- in blood and urine, detn., 9941
- chemotherapy, toxic effects, 6151
- use and misuse, 4573
- conc. in bile, 11028
- in blood and excretion, man., 2320
- cytotoxicity caused by, mechanism, 15181
- treatment, 13178
- derivatives, absorption and excretion, 2322, 2323
- in avian malaria therapy, 11584
- benzyl-, in malaria prophylactic therapy, 13549
- chemotherapeutic value and pharm., 2299, 15208
- effect on *Brucella* spp., 6148
- on oxidation-reduction potentials of hemolytic streptococci, 6157
- of heterocyclic amines, in streptococci and pneumococci infections, 17250
- in malaria therapy, 11583
- in tropical diseases, 17243
- in tropical pyomyositis therapy, 17246
- in tuberculosis therapy, 2659
- detn., 13178
- new coupling component for, 10863
- di-, absorption and excretion, dog, 2322
- in cecal infections, mice, 2299
- effect on:
- acid-base balance, dog, 12643
- bacterial toxins, 15184
- Bacterium necrophorum* exp. infections, 6140
- bacteriophages, 17283
- blood bactericidal power for gonococci, 15196
- blood cells, 2401
- blood pigment, 13178
- blood spectrum, 11261
- electrode potential of hemolytic streptococcus cultures, 6139
- Escherichia coli* in vitro, 9931, 13546
- exptl. tuberculosis, 6143, 14920
- fibrinolytic activity of streptococci exudates, 11600
- gonococci, 9992, 13546, 15193
- gonococci "toxin" in vivo, 806
- heart, 13178
- hemolytic streptococci, 2667
- in blood and serum, 17263
- in tissue culture, 11591
- ketonuria and sugar metabolism, 5757
- leukocyte counts, 17243
- mouse tumors, 537
- pertussis, 9865
- phagocytosis, 6154
- pneumococcus growth and inhibition, 2662
- pneumococci infections, 6152
- pneumococci, types I and II, 17276
- scarlatinal complications, 13427
- Staphylococcus aureus* in vitro, 13546
- streptococcus infections, 13178
- streptococci, of bovine mastitis, 15372
- temp. and, 13178
- in vivo and in vitro, 9919, 13546
- streptococci septicemia after a burn, 9855
- streptococcus dissociation, 6154
- tongue in pneumonia, 15194
- elixirs, containing diethylene glycol, toxicity, 14862
- estimation in biological fluids, 4576
- ethanol-, absorption and excretion, dog, 2322
- excretion by digestive glands, 12877
- histopathol. changes in hens and rabbits due to, 6149
- mechanism of action, 6133
- theories reviewed, 2656
- in vitro, 17280
- methemoglobin formation by, 527
- in vitro, 17252, 17253, 17274
- control by methylene blue, 5515
- in patients with cyanosis after admin., 10941
- in milk, estimation, 6131
- neutropenia produced by, 2313
- oxidizing agent formed by surviving tissues plus, 17253
- passage through placenta, man., 427
- pharm., toxicology and chemotherapy, 2299, 7788
- photoallergy and primary photosensitivity to, 11585
- Sulfanilamide (continued)
- pneumococcus acquired tolerance to, 15209
- for preservation of blood for transfusion, 11664
- products of ultra-violet irradiation, 9108
- progress in use, 6137
- psychoses associated, 17269
- and related drugs, effect on type-I pneumococcus in vitro, 9937
- in human and animal diseases, 17281
- porphyritic action, 17274
- synthesis, 4571
- in tuberculosis therapy, 9920
- renal excretion, dog, 2146
- rheumatic fever prophylaxis by, 2663
- scarlatinal antitoxin prophylaxis, 11553
- solutions, H₂O₂ formation and reversible oxidation-reduction in, 12707
- in spinal fluid and blood after intrathecal inj., 7368
- in therapy of:
- acute suppurative streptococci arthritis, 13551
- avian coccidiosis (exp.), 15200
- bovine mastitis, 6237
- brucellosis, 6184, 8189, 11519, 15266
- urinary tract infections, 15276
- chancroid, 15199
- children's infections, alone and with serotherapy, 15198
- cystitis, 8182
- epidemic cerebrospinal meningitis, 11576
- encephalitis due to equine virus, 15239
- equine coryza, 11720
- Friedländer's bacillus infections, 9914
- gas-gangrene (exp.), 17260
- genital tract (upper ♀) infections, 13539
- gonococci arthritis, 2658
- gonococci infections, 15193
- gonorrhea, 6147, 9923
- derivatives and, 9985, 15204, 17258
- of lower ♀ genital tract, 11597
- hemolytic streptococcus infections, 4566
- lobar pneumonia, 13629
- lymphogranuloma venereum, 17209
- malaria, 6150
- monkeys, 13536, 15211
- measles, 11573
- meningococci infections, 9914
- Pasteurella* infection of birds, 11579
- pneumococci infections, 9914
- pneumococci lobar pneumonia, 15197
- pneumococci meningitis, alone and with serum, 13540
- pneumococci pneumonia, 11586
- with serotherapy, 15191, 17133
- type-III, alone and with serotherapy, 9918
- pneumonia, 8177, 15194, 17213
- serotherapy plus, 17275
- poliomyelitis, 920
- pyelitis, 8182
- rabies, 9921
- rheumatism and arthritis, 9604
- Shigella* dysentery, 4567
- streptococci infections, 13551
- alone and plus serotherapy, 17281
- children, 15198
- streptococci mastitis, 1013
- trichinosis, 8713, 11596
- Trypanosoma equiperdum* infections, 4568
- tuberculosis, 2328, 4551
- typhoid (exp.), 9927
- undulant fever, 17261
- urinary-tract infections, 11577, 17248
- virus-disease, 6146
- Welch bacillus infections, 9914
- toxicity, 15212
- ultra violet as affecting, 538
- as urinary antiseptic, 13534
- Sulfanilamidoacetophenone, toxicity and excretion, 14837
- Sulfanilyl sulfanilamide, chemotherapy, toxic effects, 6151
- effect on development of fixed rabies virus in rabbits, 12643
- histopathol. changes in hens and rabbits due to, 6149
- in therapy of rabies, 9921
- virus-disease, 6146
- Sulapyridine, absorption and excretion, and acetylation, 2661, 14784

SUBJECT INDEX

Sulfapyridine-Surra

- Sulfapyridine (continued)
adsorption, inhibition by peptone, 11593
agranulocytosis after, 16432
antipyretic effects, 13544
bacteriostatic effects, on bacterial
culture, 2654
inhibition by peptone, 11593
chemotherapeutic and physiological ef-
fects, 17271
clinical statistics, 13544
complications in therapy in exp. animals
by, 17278
effect on:
 Bacillus coli in vitro, 9931
 bacteriophages, 17283
 blood counts, 17247
 kidney, rats and monkeys, 7738, 7764
 meningococci, 17271
 pneumococci, 8179, 17271
 mechanism, 15206
 type-I, 17273
 types I and II, 17276
 type-II in vitro, 9625
 staphylococci, 17271
 streptococci, 17271
 temp. and, 13178
 estimation in biological fluids, 4576
 "fast" pneumococcus strain, 11595
 metabolism, 17802
 fate in body, 14835
 intracysternal inj., effects, 8179
 mechanism of action, 13470
 pneumococcus antiserum therapy, 13470
 and related drugs, photosensitization by,
 9922
 sodium, toxicity, 14836
 therapeutic and toxic effects, 17254
in therapy of:
 cerebrospinal fever, 11607
 coccal infections, 15182
 epidemic cerebrospinal meningitis, 11576
 Friedländer's bacillus infections, 9914
 gas-gangrene (exp.), 17260
 lobar pneumonia, 13550, 15216
 measles-complicated pneumonia, 17255
 meningococcal infections, 9914, 9923
 pneumococcal infections, 9934, 9935, 15337
 15190, 17247, 17189
 immunotherapy combined, 17189
 type-II, 17274
 pneumococcal meningitis, 17265
 fatal case, 17266
 pneumococcal pneumonia, 8180
 11586, 12643, 13403, 15192
 pneumococcal pneumonia types, 15201
 alone and with serotherapy, 15201
 pneumococcal type-I pneumonia, alone
 and + serotherapy, 9936
 immunity after use, 11608
 pneumonia, 8174, 8176, 8177
 15203, 15215, 17213
 17249, 17270, 17366
 complications and, 17255
 serotherapy plus, 15207
 poliomyelitis (exp.), 15185
 sinus malaria, 4549
 Staphylococcus aureus infections, 15190
 streptococcal infections, 17250
 tropical diseases, 17243
 tropical pyomyositis, 17246
 tuberculosis (exp.), 15189
 typhoid (exp.), 9927
 undulant fever, 9931
 urinary infections, 9914
 Welch bacillus infections, 17251
 toxicity, 8184
 urinary excretion products, 7738, 7764
 urothiasis due to, rat and monkey,
 7738, 7764
Sulfarsphenamine, cerebro-spinal fluid
 trypanocidal after, 2304
 in syphilis therapy, comparisons, 17264
Sulfate(s). (See also *Sulfur*; *Sulfuric acid*;
 and under specific sulfates, e.g.,
 Magnesium sulfate.)
 bacteria reducing, sources, 6320
 detn., in blood, 16376
 in urine, in benzene exposure, 2134
 effect on edema of nephritis, 14824
 on toxicity of nitro compounds, 16374
 etheral, acid hydrolysis, 7564
 excretion, dog, 7796
 as intravenous antidote to Ba, 2938
 in rainwater, factors affecting, 2938
Sulphydryl group. (See also *Cysteine*;
 Glutathione; etc.)
 in edestin, excelsin, amandin and globin,
 7284
 effect on:
 antispasmodic action of As, Bi and
 Hg, 13178
 spirochete activity, 17245
 toxicity of nitro compounds, 14824
 enzymic oxidation-reduction and, 195
 as growth stimulants, 9209
 oxidation by liver, titanium as affect-
 ing, 5477
 reaction with phosphotungstic acid and
 sulfite, 208
 reduction by sunlight, 9104
 relation of conc. to mitosis and growth,
 Phaseolus, 10314
 rôle in metabolism, *Obelia*, 2022
 in tuberculosis (exp.) therapy, 13554
Sulfide(s). (See also *Hydrogen sulfide*.)
 di-, rate of reaction with phosphotung-
 stic acid and with sulfite, 208
 dichlorodiethyl. (See *Mustard gas*.)
 toxicity, in garlic, 4902
Sulfite, reaction with sulphydryl and di-
 sulfite compounds, 208
Sulfocyanate. (See *Thiocyanates*.)
Sulfonamide(s). (See also *Prontosil*; *Sulfa-*
 nilamide.)
 allergies due to, 15188
 in *Bacillus proteus* infections, 4555
 in *Bacillus pyocyaneus* infections, 4555
 in bacterial infections, 4577
 in coccal infections, mice, 2299
 dermatitis due to, 15188
 effect on:
 bacteria in vitro, 4550
 Clonorchis sinensis in vitro, 4552
 pneumococci, types I and II, 17276
 in *Escherichia coli* infections, 4555
 gonococcal vulvovaginitis therapy by,
 6132
 in hemolytic streptococcus infections, 4565
 for measles complications, 11588
 mechanism of action, 6145
 on bacteria, 4577
 theories reviewed, 2656
 methemoglobinemia induced by, 17274
 in peritonitis (exp.), 4555
 in pneumococcal infections, type II,
 4556
 type-XXII, 4564
 porphyritic action, 17274
 progress in use, 6137
 in streptococcal infections, 811
 in surgical infections, 4553, 4554
 in tetanus, 4570
Sulfone(s), aromatic, streptococcicidal ac-
 tion and toxicity, 543
 p-acetylamino-phenyl- intracysternal
 inj., effects, 14835
 diamino-diphenyl, derivatives, chemo-
 therapeutic value, 15208
 effect on tubercle bacilli, 11603
 11604
 $\beta\beta$ -dichlorodiethyl, effect on immunol.
 properties of proteins, 8098
 effect on:
 gonococci, 17262
 Klebsiella pneumoniae, 17262
 pneumococci, 17262
 streptococci, 17262
 therapy, in malaria, 11583
 in trachoma, 11578
 Sulfosalicylic acid, reaction in albuminuria
 simulating Bence-Jones protein-
 uria, 5661
 Sulfosuccinic acid, Na esters, as wetting
 agents, 12231A
Sulfur, adsorption by oats, P as affecting,
 12059
 acidification of soil with, 15868
 in ash of *Cysticercus*, 17910
 in blood. (See under *Blood*.)
 in *Capillaria* therapy, turkeys, 17894
 colloidal, metabolic fate, 12643
 compounds. (See also specific com-
 pounds or classes of compounds,
 e.g., *Sulfates*.)
 chem. and metabolism, review, 14440
 effect on blood and tissue glutathione,
 16408
 on germination, lettuce seed, 17696
 in leaves, nutrient materials as af-
 fecting, 17717
 organic, "antidotoxic" action, 2656
 utilization for growth, 16482
 derivatives of benzene, in pneumococcal
 infections, 9929
 detn. in fodder and excreta, 3588
 effect on:
 absorption of Se by wheat, 1409
 growth, diatoms, 12077
 effects of homeopathic doses, man, 16794
 expectorant action, 5758
 as fungicide, particle size, 3169
 in *Helianthus* leaves, daily and annual
 variations, 8598
 as insecticide. (See also *Lime-sulphur*.)
 for cotton boll weevil and flea hopper,
 5026
 for hemiptera on cotton, Ariz., 10407
 for mite, 10416
 particle-size detn., 12233
 for pear blister mite, 10398
 metabolism, in plants, 15750, 17717
 osseous intramedullary injection, ef-
 fect on blood pressure, 13103
 in plant proteins, distr., 6607, 6608
 in proteins, distr., 1927
 in soil. (See under *Soil*.)
 toxicity, dietary factors as affecting,
 rat, 16456, 16457, 16458
 in urine. (See under *Urine*.)
 waters, effect on blood and tissue water
 content, 7357
Sulfur bacteria. (See *Bacteria, sulfur*.)
Sulfur dioxide, in air, near New York
 City, 6617
 injury to plants, 6616
 poisoning, as cause of asthma, 13282
 toxicity to animals and insects, 11262
Sulfuric acid, effect on aggregations of
 tadpoles in light, 7615
 isotonic conc., detn., 5435
 as seed disinfectant for cotton, 17828
 in viscose rayon mfg., toxicity, 7919
Sulidae (Aves), p.1881
Summation. (See under *Muscle*; *Nerve*;
 etc.)
Sunfish, parasites, Florida, 15948
Sunflower(s). (See also *Helianthus*.)
 flue dust as affecting, 4910
 pigments in seedlings, relation to seed
 size, 1403
 research problems, 5329
 use in B deficiency test, 12056
Sunlight. (See under *Light*.)
Sunn hemp. (See *Crotalaria juncea*.)
Superphosphate. (See under *Fertilizer*,
 phosphorus.)
Supersonic waves. (See *Sound*, *high fre-*
 quency waves.)
Supporting apparatus, 12643
Suprarenal gland. (See *Adrenal gland*.)
Suprarenalin. (See *Epinephrine*.)
Suprifen, effect on circulation, 4142
Surface(s). (See also *Adsorption*; *Films*.)
 interfacial forces, rôle in growth of
 frog cancer, 14894, 14895
 betw. watery solns. and oils, factors
 affecting, 16306
 phenomena, immunological, 11554
 sterilization, by aerosols, 6216
Surface tension, bactericidal power of
 alcohols and, 979
 of benzpyrene, carcinogenesis and, 574
 effect on oil sprays, 10475
 of serum, during insulin shock, in
 schizophrenia, 7916
 of urine, 3950
 of water-sol. vitamin concentrates, 3712
Surfers foot, mycoflora, 13623
Surgery, antiseptics used in, effect on
 bacteriophages, 17283
 appendicitis, preoperative serotherapy,
 4527
 aseptic, advances since Lister, 11692
 bacterial and disinfection relations,
 2682
 in chronic constrictive pericarditis, 7730
 diseases treated by, statistics on %, 977
 dressings, sterilization by electric fields,
 1000
 dyes used in, effect on bacteriophages,
 1283
 effect on cancer of eyelids, 14897
 on tuberculin allergy, 6096
 foci, cocci from, virulence detn., 13607
 streptococci from, spp. and serol.
 groups, 916
 history, 1678
 infections, chemotherapy by sulphona-
 mide compounds, 4533, 4534
 otorhinolaryngological, complement titer
 after, 2587
 peritonitis, preoperative serotherapy,
 4527
 of toxic goiter, indications, 16936
 in tumor control, 14888
 water balance and, 14528
Suricata *suricata*, new tapeworm from,
 15987
Surra. (See also *Trypanosoma evansi*.)
 in bovines, Hyderabad State, 17903

- Sus* (p.1883*) *scrofa*. (See also *Pig*.)
 chromosomes of,16161
 hypothalamus and subthalamus,
 anatomy,7958
verrucosus sumatranus,12448
 Suslik. (See *Citellus*.)
 Suspensions. (See *Colloids*.)
 Suspensor. (See *Embryo (plant)*; *Embry-
 ology*.)
 Swallow(s), migration, over Europe, low
 temp. as affecting,8830
 Swammerdam, biography,7074
 Swamp(s). (See also *Bog*; *Fen*; *Marsh*.)
 acid and lime-loving plants in, ecology,
10777
 cypress, vegetation, Maryland,16252
 cypress-gum, phyto-sociology, Louisiana,
12588
 drainage, as means of increasing forest
 growth, Finland,15659
 succession in, Louisiana,5368
 vegetation, of N. S. Wales,12586
 in Sweden,10790
 Swamp fever, serodagnosis, by agglutina-
 tion and complement fixation, 6086
 virus, resistance to physical and chemi-
 cal agents,958
 Swan(s). (See *Anatidae*.)
 Sweat. (See also *Sweat glands*.)
 bromide in,3942
 hypothalamic center,2226
 insensible, caffeine as affecting, man,
11252
 Sweat glands. (See also *Glands, sebaceous*;
Sweat.)
 ducts, wall of intra-epidermal, struc-
 ture,15038
 secretion, seasonal variation in activity,
3670
 Swede(s). (See *Rutabaga*.)
Sueria (p.1866*), n. sp.,2870
 Sweet clover. (See also *Melilotus*.)
 as feed, for dairy cattle,1195
 leafspot and rootrot due to *Stagono-
 spora meliloti*,3109
 "Sweet clover disease," of rabbits, alfalfa
 protective action against,17395
 Sweet corn. (See also *Maize*.)
 culture and vars. for muck soils,
 Indiana,1238
 drought resistance, characters associated
 with,2937
 fertilizers for,2983
 hybrids, development and records on,
15594
 spiders and insects associated with,
3311, 6698
 Sweet pea. (See *Lathyrus*.)
 Sweet potato(es). *Actinomyces* spp. on,
 pathogenicity,3169
 breeding, in Louisiana,17592
 drying, technic and vars. suitable for,
1178
 fertilizers for,15567
 nutrient deficiency symptoms,13877
 shape of roots, N as affecting,13791
 starch manufacture from,13825
 traumatic bud variations,7131
 value in diet, man,14517
 vit. B₁ and flavin in cooked and raw,
9224
 weevil on, control, effect on germina-
 tion,14115
 Sweetpotato weevil. (See *Cylas formi-
 carius*.)
 Swelling. (See also *Ascites*; *Edema*;
Hydration; *Plasmolysis*; *Water*,
absorption.)
 Swift(s) classification,18078
 Swim bladder, of fish, inflammation due to
Pseudomonas and *Leuiciscus*,623
 response to sudden pressure decreases,
Lebistes,5604
 Swimming. (See under *Exercise*; *Loco-
 motion*.)
 Swine. (See *Pigs*.)
 Swine erysipelas. (See *Erysipelas, swine*.)
 Swine fever. (See *Hog cholera*.)
 Swingback. (See *Ataxia*.)
 Sycamore. (See also *Platanus*.)
Discula platani on, control,5005
Sykidia (p.1860*) *droebakense*,6331
Syllidae (Annelida), p.1871*
Sylviacapa (p.1883*) *grimmia*, preorbital
 glands, anatomy,13235
Sylvilidae (Aves), p.1882*
Sylvilagus (p.1882*), tax.,10655
14312, 18100
palustris paludicola, escape behavior,
18089
Syma (p.1881*), n. subsp. in,7022
 Symbiosis. (See also *Commensalism*;
Legume nodule bacteria; *Myco-
 rhiza*; *Parasitism*.)
 of *Amphitripton* and *Stichactis*, nature,
 histology,14392
 of *Azotobacter* with coliform bacteria,
17434
 bacteria, in beetle ovipositor,14247
Pettenkoferia on, review,6317
 of termite, site and life hist.,1685
 in culture of acid-fast bacteria,8258
 hermit crab-*Hydractinia* alga,15982
 by legume nodule bacteria, carbo-
 hydrate-nitrogen relations, 11788
 of lichens,1086
Oospora and *Penicillium* in citrus fruit
 rot,17747
 in orchids,10779
 pine and fungi,10786
 plant spp. on *Agathis australis*,9017
 wood wasp and beetle, on New Zealand
 conifers,15926
 SYMMETROVESICULA (Platyh.)
 (p.1869*) chaetodontids,6808
 Sympathetic nervous system. (See *Nerve*,
cervical sympathetic, splanchnic, etc.;
*and Nervous system, autonomic and
 sympathetic*.)
 Sympatheticotonia. (See *Nervous system*,
sympathetic.)
 Sympathico-endocrine insufficiency, new
 syndrome,2404
 Sympathin(s), E and I, effect on iris
 sphincter,13155
 in leeches and mealworms,9384
Symphalanges, material in American col-
 lections, catalogue,2459
Symphia parasitic, on *Diagomyza* spp.,
3193
 Symphyla (Myriopoda), p.1873*
 antennal musculature,10577
Symphylella (p.1873*), n. spp.,8798
subterranea, soil distr., factors affecting,
9003
Symptistis (p.1877*), spp. tax. note, 10616
Symploca (p.1860*), n. sp.,8385
 Symplocaceae (Dictyodendones), p.1866*
Symplocos (p.1866*), n. spp.,2882, 4724
 of Oligocene, Germany,4724
fasciculata, insect gall of,8606
 Symptomatic anthrax. (See *Anthrax*,
sympomatic.)
Sympycnus (p.1877*), n. sp.,14256
Synallectula (p.1873*), n. spp. n. nom.,
16081
 Synanthae (Monocotyledones), p.1864*
 Synanthrin. (See *Inulin*.)
 Synaphobranchidae (Pisces), p.1879*
 Synapsis. (See *Chromosomes*; *Meiosis*.)
Synaptomys (p.1882*) *borealis*, in Quebec,
5240
c. cooperi, in New York,14312
stonei, in Kentucky, 1st record, 5254
Synapturichthys (p.1879*), *kleini*, sensory
 papillae,3391
 Synapturidae (Pisces), p.1879*
Synecephalis (p.1861*), new species, 6354
 Synchytriaceae (Fungi), p.1861*
Synchytrium endobioticum. (See also *Potato
 wart*.)
 genetics of resistance to, potato, .65
 longevity in soil not affected by ro-
 tation,15876
 Syncoelidae (Platyhelminthes), p.1870*
 Syncope, due to hyperirritable carotid
 sinus, venous pressure in,498
 fatal, drugs causing,14818
 induced by gravity, intramuscular tissue
 pressure and,12643
 Syndactyl. (See *Digits*.)
 Syndrome, adaptation, effect on blood
 vol. and OI distr. between erythro-
 cytes and plasma,12643
 adrenogenital, etiology,14959
 genital,12643
 cardio-pulmonary, etiology and pathol-
 ogy,631
 Charcot-Adams-Stokes, metastases of
 cervical carcinoma and,4211
 effort, cause in hypertension,504
 etiology,372
 infantilism, webbed neck and cubitus
 valgus,652
 Laurence-Moon-Biedl, components, in-
 heritance,13196
 Parkinson's. (See *Paralysis agitans*.)
Synechococcus (p.1860*), n. sp.,8385
Synechocystis (p.1860*), n. sp.,8385
 Syntognathi (Pisces), p.1879*
 Synephrin, effect on:
 anesthesia,4169
 blood pressure, epinephrine and, 7775
 bronchial muscle,5781
 circulation,4142
 complement fixation,929
 heart,14860
 frog,16774
 nictating membrane,5730
 quinidine action, cat.,14825
 smooth muscle,11216
 toxicity of nitro compounds,14824
 Synergism. (See *Antibiosis*; *Commensalism*;
Parasitism; *Symbiosis*.)
 Synergy, in chemo-immunotherapy,
4569, 8185
 of drugs. (See under *Drugs*.)
Syngamus. (See *Gapeworm*.)
 Syngamy. (See *Fertilization*.)
 Syngnathidae (Pisces), p.1879*
Syngnathus (p.1864*), N. and Central
 American spp.,4769
 Synodontidae (Pisces), p.1879*
Synodus (p.1879*), revision,12424
 Synoecia. (See *Communities*.)
Synoecius (p.1881*) *australis*, economic as-
 pects of, Victoria,5186
 Synovial fluid, cause of change in volume,
2278
 as medium for bacterial growth causing
 bone taint,10058
 mucopolysaccharide from,7366
 origin and nature,9158
 protein passage from vascular system
 into,14495
Syntemes (p.1875*), n. sp.,8785
Synthyris (p.1867*), n. f.,1158
Syntomus (p.1877*), tympanal organ
 morph.,10617
 Syntropan, effect on digestive tract, 14800
Syphacia (p.1870*) *trichosuri*, from
Trichosurus,14214
 Syphilis. (See also *Paralysis, general*;
Treponema pallidum; *Veneral dis-
 eases*.)
 acquired, in infancy and childhood,
15344
 aneurysm of aorta arch in, 9521, 18127
 of coronary artery in,2273
 blood pH in,16410
 book,9074
 cantharides blister for detecting, 18625
 cardiovascular, necropsy survey, 11208
 as cause of paroxysmal hemoglobinuria,
636
 changes in cerebrospinal fluid vs. yaws,
9611
 chemotherapy,11592, 17244, 17245
 by arspenamines,817
 by bismuth compounds,816
 by rhodium salts,854
 by thorium chloride,852
 various untested compounds tried,
855
 complement fixation in, by W. K. K.
 antigen,8126
 congenital, chemotherapy,17264
 intestinal lesions,9602
 control, advances in,18683, 15295
 in industries,15302
 results in Canada,11675
 diagnosis by reduction rate of oxalic
 acid-KMnO₄ solns.,13630
 effect on liver cirrhosis due to CHCl₃,
2094
 epidemiology, contacts in,15340
 eradication, fundamentals in,11680
 in etiology of aneurysms,4089
 in etiopathogenesis of tuberculous sclerosis,
2407
 exptl. placental extract as affecting,
8121
 as factor in bioscopic diagnosis of
 cervical lymphadenopathy, 9963
 fever therapy in rabbits,8186
 gastric, case reports,4618
 general account,11686
 heart failure in, temp. as affecting,
4057
 hibernation in hamster as affecting,
18598
 immunity to, corneal relations in exptl.
 animals,2522
 flocculating antibodies and,10002
 inapparent in baboon with passive im-
 munity transfer by serum, 13395
 infection and therapy, serological reac-
 tions and immunity in relation
 to,17160
 juxta-articular nodules associated in,
981
 keratitis, exptl., in rabbits,16896
 late, seminal infectiousness in,15312
 latent,13598
 chemotherapy,15179
 mental disease, treatment by virus of
 tsutsugamushi disease,7659
 neoarsphenamine effect on sera of nor-
 mals vs. cases,15273
 neuro-, aldarsonic therapy,15195
 chemo- plus fever therapy,15180
 Pallen vaccine for, evaluation,11689
 prenatal, in one of twins,15346
 protective antibodies in sera of exptl.,
11564

Syphilis (continued)

- provocative reactions, factors affecting, 15273
as public health problem, 11700
quantitation of inocula in exp., 15285
rabbit spontaneous spirochaete-induced, 6249
serodiagnosis. (See also Complement fixation.)
basis of reporting as positive, doubtful and negative, 8267
biological and chem. studies of tests, 17346
cleaning and sterilizing tubes for, 17332
by coaguloreactions, 866, 2520
complement fixation, vs. flocculation methods, 8130
optimum ratio of cholesterol to tissue extract in, 17336
simplified, 11650
antigen preparation, 11651
differential method, 17343
disagreements of Kline, Kolmer and Kahn tests in relation to case histories, 4482
Eagle flocculation method, 15288
flocculation tests, avian serum globulin in, 6078
review, 10006
Gaetgens pallida reaction specificity, 8256
by Hirschfeld-Klinger clotting reaction, mechanism, 2520
by Ide test, comparisons, 11656
by Kahn test, 15302
by Kline test, multiple ring maker for, 17338
by Kohler complement fixation test, lyophilic complement for, 9994
laboratory administration, 8130
Lange test, gold sol types for, 11665
Laughlin method appraised, 4489
8253, 11656, 12288
Mazzini flocculation vs. Kline exclusion tests, 8262
mechanism, 17160
by Meinicke flocculation test, Lwowski modification, 908
by pallida reaction, reliability and comparisons, 9983
precipitin reaction (new) for tropical use, 806
by rapid slide flocculation test, 8269
Sellek-Frade technic of Meinicke reaction for congenital infant, 10003
by slide test, heating serum for, 8265
specificity, 6030
tests compared, 808, 1397
tuberculosis as affecting, 17340
Wassermann reaction, avian serum globulin in, 6078
Wassermann-Kahn reaction, non-specific cases and causes, 6065
and factors affecting, 2536
Kahn test compared to modified, 6064
mechanism, 8256
non-specific substance fixed by antigen, 8260
photograph recording, 4491
positive sera and factors affecting, 837
prezone and non-specific reactions, 8268
role of complement components in, 13396
therapy, in prevention of cardiovascular disease, 11204
sobisminol, oral admin., 11589
trypanamide, dermatitis due to, 4559
Syphilodermata, differentiation and factors influencing, 4608
Syringa vulgaris, rooting of cuttings, hormones and methods compared, 17683
Syringe, Krogh's precision, for detn. of specific gravity of serum, 16369
Syngospora albicans, from surfers foot, 13623
Syrphidae (Diptera), p.1877⁴
predators of aphids, Ont., 10451
Syrphus (p.1877⁴), n. sp., 6897
torvus, as enemy of plant lice, 8649
habitat and food of, Saxony, 8649
tricoloratus, as enemy of sawflies, 10431
larvae eating sawfly larvae, 10431
predator on *Lygaeonematus*, 5051
Syrphopus (p.1880²), n. spp. from Peru, 5166
Syrups, alcohol production by *Saccharomyces ellipsoides* in, 1025
Systropus, mimetic resemblance to wasps, 8994
Syzygium (p.1866²), n. sp., 2828, 6431
spp., in China, 11892
cordata, distrib. and economic value, 2889
durability of wood, 2889
Sziladyus (p.1877³) *solstitialis* v. *ciureai*, described, 3335
- T
- Tabanidae (Diptera), p.1877³
of New York, distr. and nomenclature, 1624
in stables, Dutch E. Indies, 3245
Tabanus (p.1877³), new spp., 1624
larvae on rice caseworm larvae, 5039
dodget, cotypes, 18010
Tabardillo. (See *Zyphus fever, Mexican*)
Tabebuia pallida, witches' broom (virus), 14061
Tabernaemontana (p.1867³), n. sp., 2882
coronaria, alkaloids from, pharmacognosy and chemistry, 15693
Tachardiephagus (p.1878³) *tachardiae*, parasite of *Laccifer*, India, 14102
Tachinidae (Diptera), p.1878¹
Tachycines (p.1875³) *asynamorus*, embryology, 768
L. H., cannibalism in and control of, 14114
Tachyglossidae (Mammalia), p.1882¹
Tachyglossus (p.1882¹) *aculeatus*, hairs, cuticular scale pattern, 7979
TACTOSTOMA (Pisces) (p.1879²)
macropus, 8806
Tadarida (p.1882²) *cynocephala*, in Alabama, 18105
attacked by hawks, 14312
food, 7038
macrotis, from Colorado, 5230
in Utah, 5219
Tadpole(s). (See under *Amphibia*; *Frog*; *Salamander*; *Toad*; under genera, e.g., *Ambystoma*, *Bufo*, *Rana*.)
Taenia (p.1870⁴). (See also *Cysticercus*; *Hymenolepis*.)
n. spp., from carnivores, 6797
carriers, blood picture, 14933
in natives, Nigeria, 6690
"Raigan" therapy of infestations by spp., 9924
echinococcus, antigenic relation to *T. pisiformis*, 17240
hydatigena, liver lesions, ruminants and swine, 12260
michiganensis, from liver of porcupine, 10538
pisiformis, antigenic relation to *T. echinococcus*, 17240
cysticerci, in rabbits, 15976
in varying hare, 1564
saginata, extract, enzymic activity, 17891
incidence, Cuba, 6720
incidence, Peiping, 17923
solium, cause of liver abscess, man, 1589
cysticercus, in liver abscess, man, 1589
incidence, Peiping, 17923
taeniaeformis, immunization trials, 8171
twitchelli, adult, in wolverine, Alaska, 1564
adult descr., 15985
Taeniidae (Platyhelminthes), p.1870⁴
Taeniodonta (Mammalia), p.1882³
Taenioglossa (Marine) (Mollusca), p.1872¹
Taenioglossa (Non-Marine) (Mollusca), p.1872¹
Taenioglossa (Siphonate) (Mollusca), p.1872¹
Taeniolabidae (Mammalia), p.1882¹
Taeniothrips inconsequens, control, by cyanamide treatment of soil, 17834
simplex, control in greenhouses, 1501
Tagetes (p.1867⁴) *erecta*, phloem development and flowering, 10172
Tail, absence, a lethal, mouse, 12548
potencies, in early gastrula, frog, 758
Takata reaction, in blood, in various diseases, 14936
in lymphogranuloma inguinale, 17334
serum proteins as affecting, 3352
value in liver disease, 1969
Talc, adhesions due to intrapericardial introduction, 5790
Talorchestia, critical notes, 3307
Talpa. (See also *Moles*.)
ecology, 5239
Talpidae (Mamm.), p.1882¹. (See *Moles*.)
Tamarack. (See *Larch*.)
- Tamias* (p.1882⁴) *striatus*, as affected by birds, 7088
in Massachusetts, 5219
subsp., in United States, range of, 14310
lysteri, life history and bionomics of, 10654
literature on, review, 10654
Tamiasciurus (p.1882⁴) *hudsonicus*, activity, 18105
food of, seeds of basswood and box elder as, 14312
abieticola, from Virginia, 5243
Tamiscus emini, Wenyonella from, 1576
TANGUTICOMOMBUS (Hymenopt.)
(p.1878⁴), n. subgen., 18029
Tanks, degreasing, trichlorethylene in, 15305
Tankage. (See *Feeds*.)
Tank-pickle, nitrite content, changes in acid factors influencing, 10046
Tannic acid, accumulation in cotton after chloroplast disintegration, 17799
in bark of Canadian conifers, 1330
effect on permeability and osmosis, 12647
in *Kalmia polifolia*, 6544
in *Lespedeza sericea*, in various organs and at various seasons, 6458
from myrobalan, extraction and uses, 4907
in pine needles, changes during ripening, 17738
plants yielding, Congo, 1805
review, 14441
in *Sarcostemma acidum*, 3045
in *Solanum villosum*, 1332
Tanytarsus (p.1877³), n. sp., 6889
TAOSIA (Moll.) (p.1872¹) (Cb), n. comb. and n. sp., 14231
Tapetum. (See *Embryo sac*; *Stamen*.)
Tapeworms. (See also *Cestoda*; *Echinococcus*; *Hymenolepis*; *Taenia*; etc.)
anemia producing substance in, 2335
and *Ascaris*, extracts, toxicity, 14179
Davaineidae in man, 14192
diagnosis, by rabbit cysticercus antigen, 17240
of dog, in rabbits, 15976
effect on growth, chickens, 17898
immunological relations, 8171
incidence, Florida, 6742
Peiping, 17923
infections, premonition and, 10485
of other animals, in man, Australia, 8688
on pasture, variation, 1569
in poultry, brilliant green therapy, 17279
rabbit resistance to, 17239
"Raigan" therapy for, 9924
serology of carriers, 2608, 2609
in varying hare, Alaska, 1564
Taphrina (p.1862²), *taxi*, 2805, 6351
11821, 15451
spp., emended description, on *Acer*, 2804
pruni, on plum, effect on pericarp development, 10367
robinsoniana, on *Alnus incana*, overwintering of, 3112
Tapioca. (See *Cassava*; *Manihot*; *utilissima*.)
Tapiridae (Mammalia), p.1883³
Tapirus (p.1883³) *hayasi* (Pl), from Tennessee cave, 12443
Tar, in atmosphere, carcinogenic effect, 16843
mice, 16870
carcinogenic effect on skin and bronchi, 16870
from coffee, carcinogenic to rabbits' ears, 13221
effect on:
immunity to Shope fibroma virus, 16845
localization of papilloma virus in skin of rabbits, 588
skin regeneration, mice, 4188
uterus and ovary, prolan and, mice, 7837
tobacco, cancerogenic action, 4223
tumor. (See under *Tumors*.)
Tarachia (p.1863²), n. comb., 2816
Taraktozenos. (See also *Chaulmoogra*.)
Taralea (p.1866²), revision, 2856
Tarazacum (p.1867⁴), n. spp., 6407
chromosome numbers, 10712
in Estonia, 17538
parthenogenesis and meiosis, 3445
sterility in castrated and non-castrated flowers, 81
Tardigrada, p.1874⁴
Tarennia (p.1867³), separated from *Enterospermum*, 11885

- Tarentola mauritanica*, haemogregarine from, 12285
 Taro. (See *Colocasia*).
 Tarpon, in fresh water, 3381
 Tarsier, habits, 5237
Tarsius spectrum, eye structure, 11433
 Tarsonemidae (Arachnida), p.1874⁴
Tarsonemus (p.1874⁴), saprozoic spp., on *Gerbera*, 10416
approximatus narissii control by vapor-heat, in bulbs, 12196
latus, on cotton, life hist., 12191
on *Gerbera*, control, 10416
pallidus, on *Gerbera*, control, 10416
Tartaric acid, in *Bauhinia reticulata*, leaves and fruits, 6554
TARTESSIDAE (Homopt.) (p.1875³), 18017
TASMANOTETRIX (Homopt.) (p.1875⁴), 18016
TASMANURA (p.1875³), n. sp. Tasmania, 3371
Taste, abolition, effect on water intake, dog, 9454
buds, of mammals, 15048
chain equations and comparison of bitter tasting solns., 2213
disparate stim., contrast and inhibition phenomena, 9456
in Eskimos, 11440
salt, threshold, 9466
sensitivity, fowl, 2201
measurement, 9455
study, 238
threshold, for phenyl-thio-urea, distr. in Netherlands and Africa, 9462
lepidoptera larvae, 13054
for salt adrenalectomy as affecting, rat, 9359
Taterona benvenuta, *Ischnolaelaps* from, 17983
Taurocholates. (See also *Bile salts*; *Cholates*; *Cholic acid*).
in pneumococcus infections, review, 11610
Taurocholic acid. (See also *Bile acids*).
formation, rôle of cystine derivatives in, dog, 5539
and thioglycolic acid in, dog, 10976
Tauroline, in pneumococcus infections, review, 11610
Tau-saghyz, rubber, exploitation method, 17635
rubber formation in, location, 17710
Taxaceae (Gymnospermae), p.1864⁴
Taxidea (p.1883²) *taxis sonoriensis*, 18095
Taxis. (See *Movements*; *Tropisms*).
Taxodium (p.1864⁴), tax., 6381, 15486
Italy, (N), 13721
distichum, ecology of, 12588
morphology of deciduous shoot, 6443
stumps, plants growing in, 5872
Taxonomy. (See also *Cytotaxonomy*; *Nomenclature*).
of animals, binomial system urged, 3412
bacterial, dissociation in relation to, 17468
binomial system, history, 1683
chromosome number and, Leguminosae, 3450
of conifers, use of physiology in, 12118
correction of incorrect names, rule concerning, 16126
Drosophila, significance of antigens in, 14367
ecological isolation and, 9085
expansion with reference to *Spermatophyta*, 2821
Houttuyn's binomials, 11855
of organisms, general divisions, 5267
phylogenetic, importance in systematic botany, 1672
of plants, based on physiology, 6486
British flowering, from chromosome numbers, 16158
history, 12482
use of glucosides in, 8595
relation of species to genus, evolutionary implications, 3900
serological aids in, 4515, 6066, 6117
terrestrial and fresh water forest faunas of N. A., keys, 10772
Taxus baccata, distrib. in Rumania, 13772
Taxus (Mamm.), p.1883³. (See *Pecary*).
Tea, fermentation in manufacture, mechanism, 17406
insect pests, India, 1490
new sp. *Paraphorus* (beetle) on, 6882
oil from seed, as adulterant of olive oil, 12044
Paraguay. (See *Mats.*)
peroxidase, properties, 17406
Teak. (See also *Tectona grandis*).
improvement of form by selection, 1289
stump planting, 13935
thinning practice, 10255
Teak bee-hole borer. (See *Xyleutes ceramica*).
Tealia (p.1869⁴) *felina*, nervous system, histology, 17066
Technic, microscopical. (See *Microscopical technic*).
Tecoma australis, *Melanodochium* on, 8407
Tectaria (p.1863²), n. sp., 1097
Tectella (p.1862⁴), spp. transferred to, 15462
Tectona, seedling growth on grassy vs. forest areas, 12001
grandis. (See also *Teak*).
branching habits, 10256
insect pests, borers, 14131
means of improving germination, 17647
natural thinning of, 15645
planting methods, 10247
Teeth. (See also *Dentition*).
abnormalities, diet of ancient Andean Indians and, 13318
ameloblastoma, solid to cystic degeneration, 14903
anatomy and physiology, book, 15039
calculus, etiology, 17446
formation, rôle of salivary phosphatase in, 5456
caries, bacterial flora, 960
chemical differences in saliva of immune vs. susceptible cases, 13419
dietary relations, 8207, 8307
disease as affecting, book, 14555, 15330, 16464
etiology, 9700
fluorides and iodoacetic acid as affecting, 17446
incidence, by age and sex, statistics, vs. sunshine, 8281
in types, 15299
Lactobacillus-inhibitory factor in cases susceptible and free of, 4459
microflora of exptl., 2644
oral flora of diabetic children and, 15038
quantitative epidemiological and etiological study, 15297
streptococci from, dissociation, 11794
susceptibility in rat, 15037
vits. and, 5551
vit. D and mineral deficiencies as affecting, 16544
deciduous, shedding factors in, 7983
deformities, allergic rôle in, 17187
dental science, books, 4303, 4305
dentifrices, antiseptic value, 4306, 4307
dentine apposition, vit. A deficiency and, 3719
dentine, Ca, P, and CO₂ detns., 4350
comp. study, mammals, 13307
specific gravity, detn., 5904
development, defective in child with hypothyroidism, 562
diet and, 7403
enamel, absence of blood proteins in, 9702
and dentine, calcification rhythm in, fish to man, 7982
disturbance in newborn, 2446
destruction by acidified candy, 5909
epithelium, Mg-deficiency as affecting, 13265
F content in relation to caries, 4348
microscopic structure, 16995
mottled, change in water supply as affecting, 13277
in Krawang, 11866
survey in S. Dakota, 8287
water F and, 9669
water supply as affecting, 8287
organ, vascularity, 5906
permeability to mineral salts, 5903
protein, 11427
qualitative tests, 15036
separation by centrifugal method, 9136
eruption rate, thyroxine as affecting, rat, 9324
fluorides as affecting, rat, 9170
form, in relation to functional needs, 7980
germ elements, regeneration in marrow elements, cats, 14999
hard tissue, density and refractive index, 15035
as influenced by:
oxalates in diet, 16459
Teeth (continued)
as influenced by: (continued)
vits. B₁ and K, 2062
vit. C deficiency, 2068
molars, development in rat and rabbits, 5957
method of grinding for observing fissure caries, rat, 9134
pulp cavities in primates, 11439
origin of human, 9737
periodontal disease, diet as affecting, 16462
P retention in, 14547
prosthesis and hygiene, relation to gastric cancer, 18228
pulp and dentine, changes after exptl. cavities, 2450
preservation method, 15041
rôle of periodontal membrane in pulp chamber, 4347
solid and grooved, of snakes, successional theory and, 11424
structure, in case of osteogenesis imperfecta, 9704
of dental pulp and innervation, 13308
hyperpyrexia as affecting, rabbit, 13306
in labyrinthodonts, 16954
succession, in shark, 2445, 9701
wounds, infections due to, 13597
Teichospora (p.1861⁴), n. sp., 15453
Teiidæ (Reptilia), p.1880³
Teius teius, muscle, end plates, structure, 7988
Tejidæ, eye, sclerotic plates, structure, 5879
Telamonia (*Cortinari*), French spp., 8393
Telangiectasia, brain (angioma simplex cerebri), pathogenesis, diagnosis, 2370
Telea (p.1876⁴), ♂ genitalia, 16042
Telencephalon. (See *Brain*, fore- and specific parts, e.g., cerebrum and optic lobes under *Brain*).
Teleogramma (p.1880³), possible synonymy, 16055
Teleology, in biology, 12461
Teleostei (p.1878³). (See also *Fish*).
forebrain, function, 16698
Teila, superotomatal develop. of (*Blastospora*), 1076
Telitozium minutiflorum, alkaloids of, 4903
Tellina (p.1872⁴), n. sp., 6823
Tellinidae (Mollusca), p.1872⁴
Telmatoebius (p.1880³), n. sp. from Chile, 6980
Telorchidae (Platyhelminthes), p.1870³
Teloschistes (p.1862³) *chrosophthalmus*, in upper Rhine valleys, 1092
Telosporidia (Protozoa), p.1868⁴
Telotrema (Brachiopoda), p.1871³
Temnnochlida (p.1876⁴), n. sp., 6883
Temnothoraci (Arthropoda), p.1878³
Temperature. (See also *Climates*; *Cold*; *Freezing*; *Hardiness*; *Heat*; *Thermal death point*).
of air and soil, effect on potatoes, 13817
apparatus for controlling, in growth chambers, 17741
body. (See *Body*, temperature.)
body temp. and, 3670
of brooder, effect on sexual maturity of pullets, 15113
characteristics, for flicker reaction, *Anax*, 13053
of fresh waters, 9044
of urease-urea system, 12675
coefficients, of choline esterase activity, 3556
for O₂ consumption of grasshopper eggs, 13341
of pancreatic amylase activity, 9097
of phosphorylase, 5451
of ultraviolet effects on proteins, 5467
critical, for visual flicker response, 2199
of cucumber roots, effect on wilting and growth, 1263
of desert subsoil in relation to root growth, 8989
devitrification, biophysical relations, 12643
differences in Michigan bog lakes, 3526
differences and x-rays, effect on mutation rate, *Drosophila*, 16206
effect on:
action of procaine and novocaine, 14844, 14845
amylase activity, 5601, 12106
anesthesia, mice, 11214
apple crop, 8985
ascorbic acid in fleshy leaves, *Bryophyllum*, 1399

Temperature (continued)
effect on (continued)

blood vol. and circulation, . . . 2265
body heat dissipation, . . . 12643
body temp. and Hb, . . . 16423
carotene loss from forage plants, . . . 5456
catalase activity, wheat, . . . 15539
cell adhesion in potato tuber, . . . 1026
color, of lizards, . . . 7607
 response to background, fish, 5678
conduction from A-V node, . . . 4074
coronary occlusion and heart failure, . . . 4057
cotton yield, . . . 10752
density change during development, . . . 4383
frog, . . . 4383
development, of Brazilian bean beetle, . . . 14386
 of *Paratritoxia*, . . . 8984
developmental rate of *Malaclemys*, . . . 15074
disappearance-reaction of amino N in liver extracts, . . . 5825
dorsal root potentials, . . . 18075
drug action on streptococci, . . . 13178
duration of muscle contraction, 2251
electrical response of grasshopper eye, . . . 14704
 electrical, of insects eyes, 12643
electrocardiogram of crawfish, 11201
embryonic and larval stages in pentatomids, . . . 12580
embryonic segregation, *Rana*, . . . 747
estrus cycle, rat, . . . 3960
 review, . . . 14639
eye color, *Habrobracon*, . . . 1764
flea population on rodent, . . . 1514
forcing, Dutch irises, . . . 10217
freezing of potato cells, relation to water-ice proportions, . . . 3501
frogskin potential, . . . 3544
fruit development in soy beans, 12570
fruit production, . . . 6506
germination and viability, carpet grass seed, . . . 11957
granary beetle, . . . 5047
grapes, wine-making qualities, . . . 8013
growth, of *Calanus*, . . . 12606
 of cotton root rot fungus, 10371
 and development, homeotherms, . . . 3668
 and metabolism of larvae, . . . 12779
 of root tips, . . . 4925
 of stems, asparagus, . . . 14002
hatching of insect eggs (*Antheraea*), . . . 8223
herbicides, . . . 13386
heteroauxin activity, modulation in radish seedlings, . . . 12067
hydranth formation, *Tubularia*, . . . 7624
insect succession in dead pine and oak stumps, . . . 10773
leaf roll, plums, . . . 13871
life of *Opisthorchis* in vitro, . . . 8688
limb duplicities, . . . 744
lipase action in milk, . . . 8083
malaria periodicity, carry, . . . 10510
♂ sex cycle in fish, (*Pundulus*), . . . 12622, 12630
mandarins, storage and composition, . . . 1273
meiosis, in *Antirrhinum*, . . . 10713
metabolism, . . . 2016
peaches in storage, . . . 17628
rat, . . . 16473, 16770
mutation rate, *Drosophila*, . . . 88
peripheral circulation time, . . . 11202
photoperiodism, spinach, . . . 15741
photosynthesis, apple leaves, . . . 17711
forests, . . . 4931
 Fucus, . . . 1840
 in lichens, . . . 12088
pitting of vegetables in storage, 13898
pollen germination, forest trees, 8573
pollen viability, fruit trees, . . . 13890
potatoes, Ohio, . . . 11938
potential rhythm of brain, . . . 5696
protoplasm of *Spirogyra*, structure and elasticity, . . . 10308
quality of hens eggs, . . . 4428
regeneration of accessory buds, mulberry, . . . 6590
reproduction, *Strongyloides*, . . . 15959
respiration, *Aspergillus*, . . . 8580
respiration and ripening, *Sorbus* fruit, . . . 1390
ripening of apples in storage, . . . 1252
 and storage of pears, . . . 6513
root pressure, . . . 4939
salt tolerance of plants, . . . 4935
seed germination, *Festuca* spp., 8467
 field beans, . . . 6480
 hops, . . . 6588
 rock-garden plants, . . . 6586

Temperature (continued)
effect on (continued)

seed germination (continued)
and storage, lettuce, . . . 13689
Trifolium, . . . 13999
separating of milk, . . . 13376
shell activity of clams, . . . 9055
size of columnar cells in intestine of Japanese beetle, . . . 8057
skin circulation, metabolism and water loss, . . . 4056
skin and pelage, mice, . . . 14694
skin temp., man, . . . 8665
spawning time in oyster, . . . 10808
sporulation of *Eimeria* oocysts, 8725
starch, chemistry, . . . 12033, 12034
strawberry decay, . . . 8496
SO₂ injury to plants, . . . 6616
swarm-spores of Myxomycetes, . . . 1085
tensility of rat's aorta, . . . 4076
thyroxin action, . . . 393
 on adrenals and thyroid, . . . 392
tomatoes, varietal differences, 15614
toxicity of chemicals, to *Penicillium* spores, . . . 12110
 of hypnotics, . . . 12643
Trich. vaginalis in culture, . . . 12274
tumors in vitro, . . . 16316
vernalization cereals, . . . 1188
viability of cereals, . . . 17743
 of seed, . . . 1324, 6583, 6584, 8572, 10193, 13917, 15726
vit. C in urine, . . . 13024
water absorption by plants and stomatal aperture, . . . 4941
 by rice, from clay-loam soil, 6485
water balance of range cattle, 15101
wheat, N content, . . . 8466
wheat seed, moisture content as affecting, . . . 13833
wing movements, *Drosophila*, . . . 8762
effective for workers in cooled offices, . . . 16236
of fruit buds, apple and raspberry, 6512
gradients, reactions of marine fishes to, . . . 3983
high, effect on:
 blood Ca of laying hen, . . . 15114
 bristle frequencies in scute and wild type, *Drosophila*, 8953
 chromosome number, *Linum*, 16178
 Triticum hybrids, . . . 12536
 development of bean rust, . . . 5004
 metaphase pairing, *Lilium longiflorum*, . . . 1699
 mortality of poultry breeds, . . . 789
 tobacco mosaic virus, . . . 6656
 wheat bunt, . . . 5006
 wing pattern, *Ephesia*, . . . 5348
of leaves, transpiration as affecting, . . . 4937
 water drops as affecting, . . . 6621
of lemons in storage, effect on reductase activity, . . . 14035
liquid air, and x-radiation, effect on maize seeds, . . . 16180
low, effect on:
 blood P, . . . 16424
 hatching, oystershell scale, . . . 8983
 spermatozoa, . . . 417
 recovery from x-rays, *Ascaris* eggs, . . . 14465
 trout populations, . . . 10807
 endured by moss cells, . . . 1402
 seasonal response of fish and, . . . 16282
of narcissus bulbs in storage, effect on subsequent growth, . . . 13892
and non-inherited changes, *Drosophila*, . . . 89
observations, average separation of stations and, . . . 16245
optimum, for development of nun moth, . . . 3194
 of proteolytic enzymes, . . . 9100
 for tyrosinase, from potato, . . . 14029
in orchards, factors affecting, . . . 8492
peripheral, in sleep, vasomotor changes, . . . 14768
of poultry pens, effect on egg production and feed consumption, . . . 17098
reaction of cockroach, . . . 3484
to flickering light, sunfish, . . . 7630
regulation in greenhouses, air conditioning apparatus for, . . . 5371
regulators, (See *Thermotats*.)
relation to forcing of rhubarb, . . . 1264
to leaf fall, *Platanus*, . . . 4942
to red deer, . . . 3535
to sex, in plants, . . . 6558
response of mosquitoes to, . . . 6707
sensations, (See under *Sensations*.)
skin, (See *Skin temperature*.)
in storage, (See under *Storage*.)

Temperature (continued)

thermal algae spp., . . . 6835
for tomatoes, in greenhouses, . . . 1245
for vegetables, effect on vars. chosen, . . . 2990
vital, lower limit, review, . . . 1903
water, effect on spawning, oyster, 5407
 number of plankton species and, . . . 14397
Tenebrio (p.1876) *molitor*, (See also *Meal worm, yellow*.)
 larvae, excretory cycle, . . . 13025
Tenebrionidae (Coleoptera), p.1876²
Tenebrionidae (Coleoptera), p.1876²
Tenebroides nana, poultry cestode uninfected to, . . . 10477
Teniasis, 'Raigan' therapy for, . . . 9924
Tenodera sinensis, number of nymphs in egg mass, . . . 14273
Tensiometers, use in ecological research, . . . 12600
Tentaculairidae (Platyhelminthes), p.1870³
Tentaculites (p.1872) *reedsii* (D), . . . 10556
Tentaculitidae (Mollusca), p.1872¹
Tenthredinidae (Hymenoptera), p.1878²
Tenthredinoidea (Hym.), p.1878² (See *Sawflies*.)
Teonanacatl, of Aztecs, identification, . . . 13971
Teosinte, (See *Euchlaena*.)
Tephritis (p.1877⁴), n. sp., . . . 10600
Tephrosia (p.1866⁴), as insecticide, review, . . . 1527
 patents for, 1911-88, . . . 5076
 macropoda, insecticidal value of, 10464
 vogeli, degueline from, as mosquito larvicide, . . . 12223
Tepperella (p.1878³) *trilineata*, forming *Acacia* galls, . . . 5139
Teranympha (p.1868⁴), morphology and mitosis, . . . 10515
Teratism, (See especially under structures, organs, e.g., *Kidney, Stamens*, etc.)
animal, anomalous ♂ lamb, . . . 761
 in calves, . . . 2697, 13339, 15085
 congenital absence of penis and associated anomalies in premature child, . . . 15089
 cyclops, brain anatomy, . . . 2434
 etiology of mongolism, . . . 4395
 fetus with one eye, . . . 17055
 hemicephalous of 18 mm. description, . . . 17059
 malformations of human embryo of 18 mm., . . . 11461
 malformed fetus, origin of defects, . . . 9777
 occurring in Ceylon dissecting room, survey, . . . 5965
 tailless mouse mutants, embryonic development, . . . 734
plant, culm duplication in wheat, 15524
floral abnormalities in Papaveraceae, . . . 15521
of maize, . . . 17804
phyllody in tomato and bean, . . . 17555
 analysis, . . . 1170
phylogenetic deductions from, *Salix*, . . . 8565
of root hairs, factors influencing, . . . 15522
virescence and phyllody of flowers, interpretation, . . . 15522
Teratology, (See also *Teratism*.)
Teratonympha, as correction of *Teranympha*, . . . 16126
Teratonymphidae (Protozoa), p.1868⁴
Terebratulidae (Brachiopoda), p.1871³
Terebratula (p.1871³) *vitrea*, note, . . . 12309
Terebratulidae (Brachiopoda), p.1871³
Teredinidae (Mollusca), p.1872⁴
Teredo (p.1872⁴) larva described, . . . 3301
Tergestia (p.1870²) *acanthogobii*, . . . 6803
Terminalia tomentosa, wood properties and uses, . . . 10270
Terminology, definition of periphyton, . . . 10804
ecological, . . . 12564
flexion and extension in relation to shoulder joint movement, . . . 9708
Termites, (See also *Isoptera* and under genera, e.g., *Calotermes*, *Eutermes*.)
bacterial symbionts, . . . 14231
 site and life hist., . . . 1635
control exptl. tests, . . . 5050
damage, book, . . . 3870
destructive to buildings, in Lesser Antilles, . . . 14237
in forestry, book, . . . 15911
galleries, fungus associated with, 8387
phylogeny, . . . 1635
Pyronympha from, . . . 10516
soil poisons for, . . . 10463

Thymus (continued)
 extracts (continued)
 I-reducing substances in, effects and analysis, 389, 391
 preparation, 219
 thymocrescin, effect on growth and development, rat, 12643
 histiocytes, rôle in phagocytosis of dyes, 11383
 hormones, anthrax prophylaxis by, 3113
 immunity relations, 13423
 implants, effect on uterus, 9429
 as influenced by:
 alarming stimuli, rat, 3911
 antiutrin-S, rat, 3796
 castration, thyroidectomy and adrenal-ectomy, rat, 3803, 5614
 cortin, rat, 9321
 hyperthyroidism, guinea pig, 3783
 ovariectomy, rat, 16613
 pituitary extracts, rat, 3925
 sex hormones, rat, 3802, 16597
 involution, relation to endocrine glands, rat, 3801
 morphogenesis, 689
 sensitivity to insulin in hyperthyroid baby, 16630
 structure, thyroidine as affecting, 13303
 tumor, metastases, rabbit, 16874
 weight, sex hormones and ant. pituitary extracts as affecting, rat, 9333
Thyone (p.1872⁴), muscles, electrolytes in, 12643
 n. sp., and spp. transferred from, 3294
Thyraster serpentinarius, in Florida, 10552
 Thyroglobulin. (See *Thyroid gland, extracts*.)
Thyroid gland. (See also *Cretinism; Goiter; Myxedema; Thyroxine; Ultimobranchial body*.)
 ablations, cholesterol feeding after, effects, 14635
 effect on:
 adrenal cortex, gonadectomy and, 12984
 anaphylactic shock, 818
 blood Cu, 10919
 blood pH, dog, 9156
 Cu metabolism, 12825
 egg production, fowl, 14052
 exophthalmos, 11351
 gestation period, rabbit, 11107
 gonad function in fowls, 11055
 growth, rat, 3908
 insulin sensitivity, 16813
 lactation, 12643
 reaction of blood sugar and chlo-rides to damaging agents, 7381
 reproductive organs, guinea pigs and rats, 9697
 reproductive system and hypophy-sis of rat, 9698
 sensitivity of BMR to thyroxine, rat, 14640
 thymic involution, rat, 3803
 wool growth after thallium poison-ing, 5791
 hypercholesterolemia after, hypophy-ectomy as affecting, dog, 12643
 hyperchromic anemia and, rat, 16916
 metabolism and heart rate, thyroid extracts as affecting, 12643
 action current, injecting perfusate of irradiated ear as affecting, rab-bit, 451
 activity, predisposition to convulsion and, 388
 rôle of cervical sympathetics and pituitary in, rat, 16635
 seasonal variations, thyrotrophic hor-mone as affecting, sparrow, 5642
 assay of pituitary thyrotrophin on chick vs. guinea pig, 3915
 on tadpole, 3932
 autografts, regeneration in partially and completely thyroidectomized rats, 9694
 in *Parasingha* deer, hist., 16985
 colloid release by centrifugal force, 5635
 cyclic changes in, ♂ starling, 2157
 development, in man, 15064
 in salmon, 17089
 discussion, 7403
 diseases, blood glutathione in, dog, 9649
 discussion, 3926
 insulin resistance and, vs. myasthenia, 9644
 vit. A deficiency and, 9684
 vit. C metabolism in, 2071

Thyroid (continued)
 dysfunction, cortical alpha rhythm and, 16934
 creatinine excretion and, children, 16826
 effect on basal metabolism, 4277
 thyrotrophic hormone in urine, 4271
 effect on:
 diabetes insipidus, salt solns. and, rat, 9660
 oxidation of amino acids by rat kid-ney and liver, 11060
 sensibility of heart to parasympathetic stim., 11050
 enlarged, in newborn lambs, 8328
 extract, effect on:
 blood picture, 12983
 castration and thyroidectomy cells in pituitary, rat, 3934
 cretinism, 4291
 diabetes insipidus, dogs, 7895
 hibernation, 14621
 hypopituitarism, 9658
 menstrual disorders, 9642
 metabolism, 14651
 heart and, rat, 14640, 14641
 premature babies, 2346
 serum phosphatase in hypothyroid children, 14870
 tissue metabolism in vitro, 12643
 weight, metabolism and effect of thyrotrophin, guinea pig, 3859
 thyroglobulin, u.v. absorption, sheep, 10867
 thyroidine, effect on thymus structure, 13303
 thyroxamine, effect on metabolism and metamorphosis, 9338
 in treatment of juvenile adiposogeni-tal dystrophy, 385
 feeding, effect on:
 alcohol oxidation, rat, 14478
 androgen excretion after testosterone inj., rabbit, 12973
 blood cholesterol, 1996
 blood and urinary iodine, 16336
 bone and cartilage, guinea pig, 9211
 development of tar-induced tumors, 2361
 immature fishes, 12956
 removal of cholesterol from skin lesions, rabbits, 14654
 follicles, appearance and behavior of living, 11417
 formation of new, in living grafts, 7972
 heat regulating action, guinea pig, 8864
 histology, 9697, 16984
 hormone, in blood, B.M.R. and, 9154
 output, action potential and, 451
 hydrolysates, calorific efficiency, 14640
 hyperplasia, morphologic changes, 4840
 yeast and thiamin as affecting, rat, 3723
 hyperthyroidism, blood volume in, 2267
 body wt. in, vits. B₁ and B₂ as af-fecting, 2060
 capillary filtration in, 2281
 cardiodynamic studies, 4067
 circulation time in, 7739, 9523, 13115
 cortin as affecting metabolism in, dog, 390
 diabetes mellitus and, 4274
 effect on:
 bone, 395
 cardiac glycogen, 4087
 litter size, rat, 7591
 ovary, rat, 12643
 thymus, 3788
 vit. C balance, 334, 14975
 epinephrin action on heart in, rabbit, 7737
 epinephrin output in, 12643
 as influenced by:
 antithyrotrophic substance, 12969
 estrogens and castration, rat, 14653
 factors, 14615
 vit. B₁ and B₂ complex, 8722
 7479, 7480
 iodine response, vs. thyroxine decay in myxedema, 9651
 liver function in, 9248
 lugol therapy, 9661, 9662
 mechalyl and adrenalin as affecting heart in, 405
 in scurvy, 16918
 splanchnomegaly and, after hypophy-ectomy, 9663
 therapy, 16936
 hypofunction, in adolescent, case, 562
 adrenal gland ingestion as affecting, 4268

Thyroid (continued)
 hypofunction (continued)
 decreased creatinuria in, 14972
 eclampsia due to, 7597
 path. and therapy, 16935
 rôle in obese children, 16819
 in senile changes, 11352
 thyrotrophic activity of urine in, 14966
 in infants of diabetic mothers, 4286
 as influenced by:
 anuran ant. pituitary, guinea-pig, 374
 avitaminosis B₁, 14939
 avitaminosis B₂, 14951
 CO intoxication, thyroidin and elityran, 3896
 estrogens, 9296, 16980
 fat in diet, 268
 high and low metabolic states, 11415
Triturus, 1415
 hypophysectomy, rats, 2439
 lactoflavine, 9309
 nicotization, guinea pig, 14642
 ovarian and thyroid hormones, in avitaminosis E, rat, 7965
 radioactive materials, rat, 10859
 section of pituitary stalk, rat, 3930
 thymol, 7970
 thyrotrophic hormone, hypophysec-tomized mice, 3815
 thyrotrophin and pituitary stalk sec-tion, rats, 12995
 thyrotrophin and thyroxine, hypophy-ectomized mice, 9294
 thyroxine, temp. and, 392
 uterine hormone, rat, 11102
 vit. A lack and surfeit, rat, 9223
 vit. B lack, rats, 7967
 interfollicular cells, structure and sig-nificance, 5894
 iodine in, rat, 11059
 morphology, in metamorphosis, frog, 5896
 after thyrotrophic hormone, hor-mones, vits., and drugs as affecting, 11414
 nuclear cytoplasmatic and colloid pH, 16986
 pathological changes in mongolism, 16981
 rôle in embryonic development, 11413
 secretion of I in vitro, 375
 stim. by cold, effects, rat, 3869
 surgery, ergotamine in, 13178
 thyrotoxicosis, autonomic hormones as affecting heart in, 405
 human sternal marrow in, 11386
 transplants, heteroplastic, into ant. chamber, rabbits, 9671
 tuberculosis, hyperthyroidism and, 5858
 variation in size, 691
 Thyroidin. (See *Thyroid gland, extract*.)
Thyronectria (p.1861⁴) *denigrata*, causing canker and wilt of *Gleditsia*, 12126
 descr., 6546
Thyropus (p.1873³), n. sp., 8749
 Thyroxine, action, environmental temp. and, 398
 antagonism to thyrotrophin, hypophy-ectomized mice, 9294
 decay in myxedema, vs. I response in thyrotoxicosis, 9651
 di-iodo-, effect on anticomplement, 8123
 effect on:
 adrenal cortex, 3840
 amphibian lymph hearts, 16735
 anticomplement, 8123
 blood Br, 12986
 body temp. and CO₂ production, guinea pig, 16626
 energy metabolism, 10971
 exophthalmos of Graves' disease, 11351
 gonadotrophic action of prolactin, guinea pig, 11404
 hypophysectomized dogs, 3690
 metabolism and heart rate, thyroid-ectomized rats, 12643
 myxedema, 5863
 nerves, 10971
 rate of tooth eruption, rat, 9324
 retina after adrenalectomy, 12989
 testicular activity and structure, rats, 7971
 thyroid and adrenals at high temp., 392
 tissue metabolism in vitro, 12643
 vit. A in liver, scorbutic guinea pigs, 11337
 fever, lactoflavin and ascorbic acid as affecting, 13156
 prep. from iodoprotein, 12807
 production of antagonistic substance in vitro, 3863
 separation from mixtures, 5490

SUBJECT INDEX

Thysanoptera-Tissue

- synergy with cortin, on tadpole metamorphosis,377
with epinephrine, on amphibia and fishes,2301
Thysanoptera, p.1875². (See under *Thrips*.)
Thysanura, p.1874¹
Thysiotorus (p.1878²), new genotype designated,18025
new species on hemlock sawfly,18025
Tibicen (p.1875²) *robinsoniana*, in Virginia and W. Virginia,1628
Tibouchina (p.1866²), n. spp.,17525
Tick(s). (See also *Acarina*; and under genera, e.g., *Amblyomma*, *Dermacentor*, *Haemaphysalis*, *Ixodes*.)
acquired immunity to,5065, 9913
diseases spread by, Uganda,2718
dog, rabies virus development (i) in,9952
as vectors of typhus,8291
intracellular microbe-like bodies in,11623
from pigs with piropilosis,12246
rabbit, tularemia infection, Alaska,4681
on varying hare,1564
Rocky Mountain wood, as vectors of tularemia,11689
sheep, control, Great Britain,14141
Theileria development in,15980
as vectors of animal diseases,10025
biological control,11707
of exanthematic typhus,13583
of infection resembling Q fever,17285
of relapsing fever,2670, 4669
.....8278, 15296
of *Rickettsia canis*,8219
of Rocky Mountain spotted fever,8298, 11688, 11689
of *Spirochaeta persica*,10011
of tick-bite fever, S. Africa,8203
virus from,4583, 4584, 4585
Q-fever relations,4585
Tick bite fever, in So. Africa,8203
Tidal zone. (See *Littoral*.)
Tides, rhythm, relation to O₂ consumption of marine animals,3494
Tidestromia (p.1865²), n. spp.,11886
Tieghemella (p.1861²), new species,6354
Tieghemopanax (p.1866²), n. spp.,13768
Tiger. (See also *Felis*.)
census, India,10658
Tilachlidium (p.1863²) butyri,6338
Tilapia (p.1880²) labriforma,6965
Tilia (p.1866²) *americana*, atavistic leaf forms,11853
seeds, as food of red squirrels, 14312
Tiliaceae (Dicotyledones), p.1866²
Tillage. (See also *Soil*.)
effect on:
food reserves in bindweed roots,10178
root aphids on maize,17864
soils,1221, 4863, 8479, 11961
of potatoes, effect on quality,1211
subsoil loosening, effect on beets, Germany,2941
Tillandsia (p.1864²), n. spp., 2828A, 2841
Tilletia (p.1862²), on wheat, control investigations,3159
infection as affected by previous inoculation,17810
inheritance of reaction to,12150
leaf mottle due to,10844
perennial mycelium in grass hosts,15847
caries, on wheat, antagonism of mildew to,4994
levis, host range among forage grasses,15847
sphagni, as conidial form of *Helotium schimperii*,4733
tritici, host range among forage grasses,15847
on wheat, absorption of chemical solns. as affecting,5007
constancy of virulence during host passage,15861
crowding of seedlings as affecting,15875
genetics of resistance,15846
high temp. as affecting,5006
Tilletiaceae (Fungi), p.1862²
Timber. (See *Forests*; *Lumber*; *Trees*; *Wood*.)
Timber line. (See *Tree line*.)
Timbo. (See *Lonchocarpus*.)
Time recorder,12643
ordinate, on electrical basis,3606
for registering snoring of small rodents,1877
Timeliidae (Aves), p.1881⁴
Timmiella (p.1863²), n. combs. and n. sp.,4748
Timothy. (See also *Phleum pratense*.)
chem. comp. and yield, fertilizer as affecting, Sweden,6455
hay, effect on protein utilization by lambs,5996
pollen, cross-sero-reactions with, 11525
weed seed, food value,5989
Timothy hay bacillus. (See *Mycobacterium phlei*.)
Tin, tetramethyl, pharm.,13178
Tinea vulgaris, hemolysins of normal sera of, constitution,6082
Tinea. (See under *Dermatoses*.)
Tinea pellionella, toxicity of mothproofing agents to,1502
Tineola biselliella, toxicity of mothproofing agents to,1502
Tingitidae (Hemiptera), p.1875³
Tinospora (p.1865²) *cordifolia*, gynoeceum and ovule development,11920
† *Tipula* (p.1877²), n. sp. (N),3373
Tipulidae (Diptera), p.1877²
Tiracola (p.1877²) *plagiata*, on cocoa, New Guinea,14107
Tissue(s). (See also *Tissue culture*; and especially under types of tissue, e.g., *Connective tissue*, *Muscle*, *Nerve*, *Xylem*; under organs, e.g., *Leaf*, *Pancreas*, etc.)
acetylcholine formation in,404, 14664
acid-soluble P in, age as affecting, 3659
acidophilic, staining method,5919
aconitase in,16312
allergy, cellular function in,4531
anaerobiosis as affecting,16471
antibody distribution in,8162
asphyxia, shock due to,9140
autolysis, in leucemias, vs. carcinoma,9586
benzpyrene as affecting,574
bioassay of body fluids on,213
Br and Cl distr. in,7809, 16381
CO₂, detn.,14481
chloride, electrodialysis,12643
replacement with nitrates,12643
deaminase, distr.,10851
dehydration and embedding without chemicals, apparatus for, 10873
density, diet as affecting,12790
diffusion forces in,10848
electrical, proteins,7676
electrolytes, artificial fever as affecting,5657
distr.,7254
embryonic, survival after transplantation and exposure to low temp.,5962
extracts, effect on:
respiration of yeast,2018
tissue culture,12832
vaccinia virus,15222
glutathione detn. in,16388
nucleotidase and nucleosidase in,12670
role in blood coagulation,12643
fluid, analysis, frog muscle,253
book,10830
detn., method,1974
in intradermal tissue,3643
volume, ether as affecting,252
frozen, hist., method of study,10872
glutathione, S preps. as affecting,16408
glycolysis, factors affecting,7413
growth, 3-4 benzpyrene as affecting, Na cholestenon-sulphonate and,7851
growth-promoting substance in injured,2041, 2042
inflammatory, chronic, effect on antigens and antibodies in vitro and in vivo,17151
injury, in Pb and As poisoning, rat, dog,9668
by radiant energy, histamine liberation and,3569
lead in, man,10989
loose texture, new frozen section method for,17001
membrane formation at lipid-aqueous interfaces,5428, 16302
mineral localization by use of electron microscope,10875, 10876
nicotinamide in,1926
normal and neoplastic, survival and growth on chorio-allantois of chick or duck,15078
oxidase, cytochrome, activity, Cu and Fe deficiencies as affecting, rat,14460
permeability. (See *Permeability*.)
phosphatase, rachitic rats,3564
plant, examination technic,3410
Tissue (continued)
potassium in, adrenal cortex as affecting, rat,3866
after injection,9085
staining,16999
pressure, intramuscular, syncope induced by gravity, and,12643
in scleroderma,4095
venous pressure and, detn.,1945
proteases in blood and urine in starvation,5442
proteins, distr.,12643
x-rays and u.v. as affecting,5457
pyruvic acid metabolism by,1909
radium in, after injection,3572
radon disintegration products in,3578
reactions to natural oils,7437
reducing ability, water of La Bourboule as affecting,7286
repair, erythrocytes as affecting,3628
respiration. (See *Metabolism (tissue and cellular)*; *Respiration, plant*.)
salt conc., marine animals,9152
soft, sarcoma, hist.,16842
softening, pectins as affecting,15793
subcutaneous, pH,16409
swelling capacity, x-ray as affecting,7256
tensions, in hypocotyl of *Helianthus*,1370
transplants,9681
relation to tumors,13213
urea in, blood urea as index,3647
vit. C, hyperthyroidism and avitaminosis B₁ as affecting,14975
oxidation,2073
volatile acid in, alcohol as affecting,10904
water, bound,10920
S waters as affecting,7357
Tissue culture. (See also *Culture technic*.)
agar-slant, of *Rickettsias*,4603
of spotted fever virus,4586
of blood cells, *Drosophila*,13341
of brain tissue, growth of nerve fibers in,8041
of cells in hypo- and hyper-tonic solns.,2473
of chick heart subjected to different temps.,17049
of chick neural crest, pigment production in,9770
of complement-fixation antigens,13458
differentiation of cells and,11449
of Donovan bodies,13599
of early chick blastoderm, differentiation,757
encephalomyelitis vaccine prepared by,11725
of explants in Carrel and Lindbergh apparatus,9767
of fibroblasts, in artificial and serumless media,740, 5953
in embryo juice,741
in extract of cardiac muscle of adult hens,15075
of fibroblasts and sarcoma, radium as affecting,3574
of fibroblastic cells, tolerance to ethyl alcohol,2469
of fibrocytes, mitosis, alcohol as affecting,9772
flask for circulation of large amt. of fluid medium,14490
of foot-and-mouth disease negative,13578
germicide evaluation by,11703
growth, tissue extracts as affecting,12832
growth-promoting substance in injured,2041, 2042
of heart in homo- and heteroplasm,11452
of heart tissues, CO and illuminating gas as affecting,756
of inclusion bodies from bovine mastitis,15254
as influenced by:
barbiturates,11224
carcinogens,16846
methyl-cholanthrene and 1,2,5,6-dibenzanthracene,611
vits. B and C,11009
of iris epithelium, estrogen and progesterone as affecting,3853
habitation to opium alkaloids,16785, 16786
irradiation with short waves,226
of kidney tissue, growth in relation to organ extracts,750
of leprosy nodules,17318
of *Leptospira icterohaemorrhagiae*, 17294
methods,8051
single-cell,6308

Tissue (continued)

- of muscine leucemia cells, 4241
 of nerve cells, 2470, 2471
 of nervous tissue, wandering cells in, 750
 of non-nervous cells, 2468
 of osteogenic cells, collagen formation, vit. C as affecting, 8052
 of ovaries in embryonic extract, development of oocytes in, 18380
 of pigment cells, 13837
 plant, vs. animal, book, 1872
 carcinogens as affecting, 16875
 of carrot, nutrient soln. for, 17700
 use of indolylacetic acid in, 14005
 of carrot tubercles, 1874
 of *Nicotiana* callus, 6593
 of pea roots, nutrient soln. for, 17706
 review, 12076
 proliferation of amyliiferous tissue of potato, 11925
 of roots, nutrient soln. for, 17707
 of root tips, species and size of tip as affecting, 15728
 of tomato, 8574, 10316, 11723
 vit. B₁ as affecting, 15732
 of protozoa, staling effects due to growth accelerator-inhibitor, 5102, 5103
 of rabbit embryonic tissues, 5962
 of Rickettsias, 4582, 6166, 8215
 of Rickettsia-like virus, 4588
 of Rocky Mountain spotted fever *Rickettsia*, 15134
 rôle of tension and pressure in bone formation, 4587
 scarlatinal, inclusion bodies in, 11613
 of spinal ganglion cells, differentiation, 15084
 of spleen, adult human, 15083
 of trachoma *Rickettsia*, 2611
 of trachomatous conjunctival epithelium, 8213
 of tubules and epididymis of mice, 15068
 tumor. (See under *Tumor*.)
 use, in breeding fruit trees, 3305
 of strip shaped explants in, 5955
 of uterine egg of guinea pig and rat, 8048
 of virus of:
 avian-plague, 4579
 ectrumelia, 4593
 encephalitis, 6164, 15247
 equine encephalomyelitis, 947, 9904
 fowl-coryza, 4598
 fowl-plague, 9957
 fowl-pox, 957, 11570
 herpes, 8104, 9942
 influenza, 4592, 8212
 lymphogranuloma inguinale, 2622
 measles, 8216
 murine typhus, 18466
 pigeon-pox, 11570
 pseudorabies, 9942, 13555
 psittacosis, 15235, 15236
 rabbit myxoma, 2617
 rabies, 950, 2630, 4466, 4588, 15245
 sheep-pox, 2634
 typhus, 9951
 vaccinia, in agar-slants, 2620, 4593
 8201, 11622, 13560, 15233
 variola, 13574
 vesicular stomatitis, 15221
 of virus-B, 9942
 of viruses, 11612, 13576, 15249
Titanethes (p.1873⁴), eye structure of blind spp., 5126
 Titanium, effect on oxidation of SH group by liver, 5477
Titanothera, extinction, period, 5081
TITUSVILLIA (Por.) (p.1869⁴) drakei (?), 6775
Titusvillidae (Por.) (p.1869⁴), n. fam., 6775
Tithys (p.1874⁴) *trinitatis*, habits, life hist., 17988
 Toad(s). (See also *Amphibia*.)
 lymph hearts, importance, 16728
 nervous control, 14733
 tadpole test for testis hormones, 9297
 Tobacco. (See also *Nicotiana*; *Nicotine*.)
 allergy, thromboangitis obliterans, and, 6115
 antigen, cutaneous reactions in children, 17187
 black-fire (*Bact. angulatum*), water-soaking of leaves as affecting, 3169
 black rootrot (*Thielaviopsis*), infection conditions, 4992
 blue mold. (See *Tobacco*, downy mildew.)
 brown rootrot, etiology, 15838
Sclerotium bataticola, as factor, 10347
Crambus caliginosellus on, control, 14121

Tobacco (continued)

- curly top (virus), production of antibodies in, 17795
 recovery and acquired tolerance, 15864
 damping off, control by spraying, 14099
 diseases, Kentucky, 1938, 15889
 U. S. A., 1939, 15890
 downy mildew (*Peronospora*), Brazil, 6635
 control, 4999
 by fumigation, 1455, 3151
 6682, 8630
 by paradichlorobenzol, 6683
 by spraying, 1456
 on field grown plants, 3142
 present status of problem, 8604
 temp. as affecting, 15891
 dry wt. and leaf area, topping and P as affecting, 15700
 effect on incidence of lung cancer, 18216
 factors in damage to, North Carolina, 1937, 5038
 fermentation, of cigar-leaf, 1030
 rapid method, 8331
 fermented, pH and its detn., 8333
 fertilizer for, effect on soil nutrients, 17582
 and salt requirements, Sumatra, 4913
 field expts., technic, 17566
 flea beetle on, 17870
 frenching, relation of TI toxicity to, 15840
 as symptom of soil toxicity, 4986
 hornworm. (See also *Protoparce*.)
 life history and control, 5030
 on tomato, in California, control, 3189
 hypersensitivity to, 6056
 industry, Puerto Rico, 10187
 leaf curl (virus), insect transmission, 17788
 leaf injury, from water-soaking, 17807
 leaf-spot (*Cercospora nicotianae*), control by spraying, 8629
 methyl alcohol content, 12043
 mosaic (virus), activation by gamma rays, 6652
 6651
 by x-rays, 1438, 1440
 analytical methods, 12136
 cellular pathology, 3169
 chemical detection in host sap, 3169
 crystallization in, 15824, 17781
 disintegration in urea soln., 17792
 effect on growth of fungi on sap, 5014
 goldsol reaction, 10361
 inactivation by microorganisms, 12134
 inclusion bodies, 14069
 inhibition by insect juices, 10357
 isolation and properties, review, 8211, 8613
 longevity, fine-curing as affecting, 6656
 migration through host plant, 3169, 15825
 mol. structure, 15834
 mol. wt., 1444
 native host plants, Brazil, 12187
 N nutrition of host as affecting, 3169
 nucleic acid, constitution and properties, 17784
 physico-chem. properties, 15826
 protein from, isolation and properties, 3169, 6658
 15823
 particle size, 8127
 and viscosity, 8125
 x-ray diffraction study, 3169
 viscosimetric studies, 15822
 purification by benzoic acid adsorption, 12135
 reactivation of formalized and N constitution, 8130
 resistant var., 3169
 thermal effects on symptoms and host, 10358
 thermal inactivation, 3169
 tinctorial method of detection, 6653
 types and interactions, 3133
 u.v. as affecting, inheritance of structure of cell and, 5472
 necrosis (virus), inactivation by HgCl₂, 8612
 thermal inactivation, 3169
 ultracentrifugal analysis, 3129
 new high-yielding var., Italy, 4817
 nicotine in, amino acids and nicotinic acid as affecting, 17721
 detn., 12046
 distr., 12017
 synthesis, soil factors affecting, 4823
 N compounds in leaves, 4945
 nutrition and fertilizers for, N. Carolina, 15542

Tobacco (continued)

- pale, cancerogenic action, 4223
 pressed juice, gel formation with sugar, 17745
 protective film of pyrethrum oil on, explt., 3192
 protein constituents, in normal vs. virus-infected leaves, 4975
 ringspot (virus), isolation and properties, 15830
 properties of virus from recovered plants, 15831
 ultraviolet absorption spectrum, 17783
 yellow form, symptoms and seed transmission, 15833
 root knot, time of transplanting as affecting, 3169
 seed cleaner, new type, 6476
 seed oil, comp. and use, 3043
 smoke, carcinogenic effect, mice, 16843
 effect on skin and muscle vascular beds, 12643
 smoking, effect on longevity, man, 453
 vasoconstriction from, 12643
 NaNO₂ as affecting, 2919
 tar, cancerogenesis, rabbit, 9591
 variety tests, Italy, 11952
 virus diseases, chem. and cytol. aspects, 3122
 virus mixtures, chem. separation, 3118
 water-soaking of leaves, stomata related to, 15791
 wilt (*Bact. solanacearum*), weed hosts as factors in, 3169
 Tocopherol. (See also *Vitamin E*.)
 dl α-, carcinogenic properties, 11281
 detn., and constitution, 1924
 by potentiometric titration, 9325
 in various source materials, 1925
 effect on muscular dystrophy, rat, 9217
 on testes, 12643
 esters, vit. E activity, 7492
 higher homologue and vit. E content, 12030
 lower homologues, 2087
 oxidation, products, 12032
 oxidation products, 15689
 preservation of fertility in vit. E deficient rats, 13035
 review, 9241
 d, l-α, stabilization, 2038
 synthesis, 12028
 in wheat and corn germ oil, vit. E content, 12029
 Todd, T. Wingate, biography, 8889
 contributions to anatomy and physical anthropology, 15056
 Tolerance to drugs. (See under specific drugs, i.e., *Morphin*.)
 Toluene, effect on leech muscle, 13186
 p-Tolymethylcarbinol, derivatives, chologogue action, 4151
Tolyposporium (p.1862²), n. spp., 17500
Tolyptothrix (p.1860⁴) *delicatula*, 15487
 Tomato(es). (See also *Lycopersicon*;
Solanum lycopersicum.)
 absorption of nutrient, at various growth stages, 15730
 aucuba mosaic (virus), cellular path., 12136
 B deficiency disease, 14072
 blight (*Alternaria solani*), control, 3169
 blossom-end rot (physiogenic), environment and nutritional interactions, 3169
 bushy stunt (virus), crystalline protein from, 4974, 4976
 carotenoids in, changes during ripening, 4878
 caterpillar pests on, identity, damage, control, 3189
 classification, physiol. condition of foliage and, 15614
 Cu in, factors affecting, 13916
 Cu, Mn, and Zn as essential for, 18972
 cracking, Mn and water as affecting, 6515
 culture, under cloth, 13905
 commercial, use of growth hormones in, 15708
 in greenhouses, Ohio, 1245
 hydroponics, 6560
 in nutrient solns., 1228
 in sand, relation to P retention by sand, 6508
 fertilizers for, 2983
 flower structure, light and N as affecting, 6514
 foliage, characters related to insect pest damage, 1495
 fruit rot, due to *Macrosporium* sp., 14044
 growth and metabolism, environmental factors in, 3169

Tomato (continued)

- hereditary response to different levels of N, P and K, 12527
- hormone formation and distr. in, light as affecting, 17682
- importations for breeding, progress report, 12521
- leafspot (*Bact. vesicatorum*), in Japan, 14054
- ♂ sterility in, 8939
- metabolism, rôle of K in, 4915
- midget, a gene mutant, 1750
- mildew, due to *Oidium*, Argentina, 15802
- mold (*Cladosporium fulvum*), resistant var., 3169
- mosaic (virus), tolerance of *Lycopersicon hirsutum*, 15858
- N, P, and K lack as affecting, 6564
- nutrition, assimilation in, 1352
- Paratiza cockerelli* on, Tex., 14117
- pectase, heat inactivation, 10048
- pectic enzymes in, 189
- phyllody in, 17555
- pomace, vitamins in, 3711
- proteins, in normal vs. virus-infected leaves, 4975
- puffing, irrigation and, 17805
- Redcap, new early var., 3015
- ripening, Bordeaux spray as affecting, 5002
- and fruit height, 6520
- respiration during, seasonal variations, 12097
- rootknot (*Heterodera*), control, by chloropierin fumigation, 3169
- by soil disinfection, 3169
- economic loss and control, Indiana, 17768
- seed germination, culture extracts of *Fusarium* as affecting, 12142
- soil pH as affecting, in greenhouses, 13883
- spotted wilt virus, protection against aerobic inactivation, 8608
- spraying, with insoluble Cu compounds, 3161
- streak, a complex infection, 16905
- tip blight (virus), descr., 6655, 15827
- variety trials, Hawaii, 15618
- vit. C in, 7486
- acidity as affecting, 15799
- wilt (*Fusarium*), control by soil disinfection, 3169
- resistance, 15858, 17826
- quantitative detn., 3169
- resistant var., 8625
- variability of strains in relation to pathogenicity, 3169
- wilt (*Bact. solanacearum*), var. susceptibility, 14053
- Tomato leaf miner. (See *Liriomyza solani*.)
- Tomato pin-worm. (See *Gnorischema lycopersicella*.)
- Tomentella*, n. sp., 17492
- Tomocerus* (p.1874), n. sp. or var., 3371
- TOMOSVAEYELLA** (Dipt.) (p.1877), n. sp., 10598, 10599
- Tongue. (See also *Glossitis*.)
- muscles controlling, cat., 710
- sensory innervation, rabbit, 7962
- smooth, incidence in leucemia, 11310
- sulfanilamide in pneumonia as affecting, 15194
- tumor, leiomyoma, hist., 2373
- Tonicella* (p.1872) *narmorea*, mantle cavity, 16011
- Tonoplast. (See *Vacuole*.)
- Tonsils, ablation, effect on rheumatic fever and rheumatic heart disease, 617
- connective stroma, 9683
- extracts, effect on blood sugar and glycosuria, 12768
- on deamination of alanine, rat kidney, 9192
- properties and hypoglycemic components, 13184, 13185
- growth promoting substance in, 12786
- palatine, arterial supply, 5889
- lymphatics, 674
- tuberculosis in, incidence and origin, 13241
- vit. C in, 16532
- Tonsillitis, chemotherapy, 13551
- exophthalmic goiter and, 4231
- streptococci of acute, virulence vs. laboratory tests, 6179
- Tonus. (See under *Muscle*.)
- Tooth. (See *Teeth*.)
- Topobea* (p.1866), n. spp., 2882
- Torenia* (p.1867), spp. in Papua, 11895
- Torpedo* muscle, N. partition, 7676
- Torrey, Raymond H., biography, 7082
- Torreya californica*, culture and growth, California, 3011
- Tortella* (p.1863), n. var., 11841
- Tortoise, Indian, *Emeria* in, 6762
- Tortricidae (Lepidoptera), p.1877
- Tortrix* (p.1877) *viridana*, on oak, in Rumania, 15910
- Tortula* (p.1863), spp. confused with *Barbula*, 6372
- transfers from, 4748
- Torula*, pathogenesis, 2345
- pyruvic acid utilization by, 2732
- histolytica, meningitis due to, 3247
- monosa, heat resistance, 15392
- Torulopsis* (p.1863) *glabrata*, n. comb., redefinition and inoculation tests, 4642
- neoformans, *T. glabrata* compared, 4642
- pulcherrima*, ascospore formation in, 6360
- fermentations by, 6269
- T. glabrata* compared, 4642
- Torus. (See *Flower*.)
- Touch. (See also *Sensation*.)
- effect on pain sensation, 7652
- study of sense, 240
- Tournefortia* (p.1867), n. sp., 2882
- Tovomita* (p.1866), n. spp., 2827A
- Tozascaris leonina*, in dogs, Egypt, 10480
- Toxemia. (See also *Intoxication*.)
- glucose inj. and, 14539
- in jejunal obstruction, 12643
- of pregnancy, blood proteins and, 2158
- induction by pituitary extracts, rabbit, 9420
- in obesity, hypertension and, 14782
- personality types and, man, 5670
- Toxicity. (In the main, indexing is done under specific substances and elements. Under "Toxicity" are papers dealing with methods or principles, e.g. relation of ionization, molecular configuration, etc.)
- equilibrium formula, as applied to action of saponin on fish, 14832
- of fungicides, measurement and interpretation, 15882
- of *Veratrum* spp., physiological evaluation, 17670
- Toxicity diseases, of ruminants, licking disease as (?), 17389
- sweet clover disease of rabbits as, 17395
- Toxicology, in general hospital, 9117
- Strongylus* tests, pH as affecting, 15975
- Toxin(s). (See also *Antigens*; *Antitoxins*; *Immunity*; etc.; and especially under specific diseases, e.g., *Diphtheria*; pathogenic organisms, e.g., *Clostridium botulinum*; etc.)
- action on muscle, 4050
- of *Acaris*, nature, 14177
- bacterial, adsorption by bone-black, 6092
- chemical and immunological study, 2530
- effect on:
- embryonic chicks, 11526
- erythrogenesis, rabbits, 5842
- tissue metabolism, 288
- effects as influenced by lipoids in tissues, 13405
- entero-, production, 2544
- as influenced by:
- cholesterol preps., 819
- Cu treatment, 13454
- lecithin-broth culture, 17305
- lymphocytes in vitro, 11550
- neoprontos, in vivo, 11580
- organic sulphur compounds, 2656
- spreading factor from serum, 8105
- multiplication (!) in tissues, 15240
- nature and mechanism of action, 2530
- neutralization in tissues by antibodies, cerebral capillary permeability factors, 8113
- conc. factors, 8112
- specific factors, 8114
- time factors, 8111
- resistance to, chemotherapy as affecting, 6142
- effect on guinea pig spp. and strains compared, 4513
- electric charge, effect on permeability of C-N-S barrier to, 11529
- local immunity to, 6104
- secreted in bites of centipedes, spiders and scorpions, 9790
- Toxocara canis*, incidence in dogs, Surinam, 15956
- Toxoid, formol, immunizing power of diphtheria and tetanus, 820
- sensitizing antigens in, 17198
- Sordelli's, in diphtheria mass immunization, 17166
- Toxomerus* (p.1877) *jussiaeae*, 12376
- Toxoplasma* (p.1869). (See also *Piroplasmiosis*.)
- avian strains, relation to *Plasmodium*, 1578
- vs. exoerythrocytic stages of *Plasmodium*, birds, 10499, 15966
- identity of human and animal strains, 12269
- like body, in sparrows, Venice, 8711
- Toxostoma* (p.1882), food habits, 9064
- reditum*, mimicry by, 5207
- rufum*, *Trypanosoma* from, 3257
- Tozzi, Don Bruno, biography, 12483
- Trace elements, in plant nutrition. (See under *Mineral nutrition (plant)*.)
- Tracey, Wm. Richard, biography, 10705
- Trachea, intrasternal convolutions, birds, 705
- Tracheal system, insect. (See *Respiration, insect*; *Respiratory system*.)
- Tracheid(s). (See also *Vascular system, plant*; *Wood*; *Xylem*; under plant parts, e.g., *Leaf*, *Root*, *Stem*, etc.)
- in ferns, 17552
- trabecula, normal cf. foreign bodies, 13780
- Trachodontidae (Reptilia), p.1880
- Trachoma. (See also *Conjunctivitis*.)
- chemotherapy, 11578, 17243
- conjunctival epithelium, tissue culture, 8213
- elementary bodies, 2628
- histopath., 15218
- pannus, differential diagnosis, 9472
- Rickettsia*, culture on chorioallantois of chick, 2611
- KCN as affecting, 2611
- Rickettsia* and, 13586, 15218
- "rickettsioid corpuscles", in etiology, 8205
- transmission tests, 8205
- virus, antigenicity, 11539
- etiology, 8205
- nature, 2628
- tissue culture, 2611
- in placental medium, 13576
- trials, 8213
- Trachycoristes striatulus*, spawning induced by pituitary extracts, 5895
- Trachydermon cinereus*, adhesive power, 5117
- Trachydium* (p.1866), taxonomy, 1136
- Tracts. (See under *Nervous system, central*.)
- Tradescantia* (p.1864), behavior of chromosome in mitosis, 1706
- chromosomes, as affected by chloroform and ether fumes, 1710
- as affected by fumes of normal butyl alcohol, 1711
- development of embryo sac, as affected by colchicine, 1712
- distr. in E. Tennessee, 4801
- effect of dehydration on microsporangogenesis, 10715
- granules in microspores, optical and chemical studies, 8597
- Mg and K solutions toxic to, effects on protoplasm, 17733
- nature of cuticle in cells, 7100
- relational coiling in chromosomes, 1702
- reflexa, chromosomes, as affected by ammonia fumes, 7108
- zebrina, mucilage from, chemistry, 1416
- staining of epidermis, with Bismarck brown, 16116
- Tragocerus* (p.1876), syn., 10595
- Training. (See also *Acclimatization*; *Athletes*; *Exercise*; *Fatigue*; *Muscle*; *Work*.)
- effect on gaseous metabolism, 10967
- Trajanella* (p.1872), n. sp. of southern Europe (K), 16008
- Trametes* (p.1862), new species, 6353
- plant, rootrot of white pine due to, 14041
- serialis, longevity in wood, immersion as affecting, 5003
- Transfusions, apparatus for, 16397
- with ascitic fluid, 7339
- of blood. (See *Blood transfusion*.)
- danger with gum arabic, 1976
- immuno-, effect on endocarditis lenta, 2280
- on staphylococci septicemia, 16901
- Transition region (root-stem). (See *Root*; *Seedling*; *Stem*; *Vascular system*.)
- Translocation. (See also *Sap*.)
- of auxin, in plant cells, 1356
- between plant cells, new method of study, 6623
- of carbohydrates in beans, indoleacetic acid as affecting, 4916
- in celery, 1281
- in raspberry, 10319
- of CO₂ in soil, to leaves, 12083
- (chromosomal). (See *Chromosomes*; *Meiosis*.)

- Translocation (*continued*)
 of fluorescein, in bean, 17713
 of heteroauxin in *Coleus*, polarity and, 13985
 electric potentials as affecting, 12069
 indoleacetic acid as affecting, bean, 4920
 of ions and indoleacetic acid, in plant tissues, 15720
 mechanism, 4936
 of plant hormones, 10307, 15721, 17686
 sieve tube structure as affecting, 10166
 in soybeans, relation to drought resistance, 14024
 in sugar beets and mangolds, mechanism, 8586
 of sugars, in sugar beet leaves, 12089
 of viruses and auxins, 17712
 of water, in apple grafts, 8512
 through radial resin canals, 15519
 Transpiration. (See also *Evaporation*; *Humidity*; *Leaf*; *Stomata*; *Water*; *Wilting*.)
 correlated with leaf intercellular volumes, 6451
 effect on:
 absorption of minerals, *Phaseolus*, 12091
 leaf temps., 4937
 root permeability, *Vicia*, 13992
 stomatal movement, *Faista*, 8593
 extrafascicular, use of berberin sulphate in study, 15749
 factors affecting, review, 1383
 humidity gradient at surface of leaf during, 6598
 in hydrophytes, 4940
 as influenced by:
 Bordeaux spray, 5002, 8627, 14093
 leaf-root ratio, lemon cuttings, 15744
 potassium, 15743
 relative humidity of air and tissues, 12090
 root temp., cucumbers, 1263
 intensity of xerophytes of Judaea, in relation to water conducting elements, 12584
 rate, effect on air pore movements, bryophyte, 11846
 from vegetation, importance, 16248
 relation, to drought resistance, sweet corn vars., 2937
 to hardness, ornamentals, 15746
 to leaf shape, fruit trees, 13888
 to stomatal index and number, bean, 15747
 to water absorption by roots, orchids, 12062
 of submersed leaves, 4938
 Transplantation, animal. (See also *Regeneration*; and especially under organs, tissues, etc., e.g., *Eye*, *Gonads*, *Kidney*, *Ovary*, etc.) (For plant material see *Chimeras*; *Ectypes*; *Propagation*.)
 of adrenals, genetic relationship as affecting, rat, 3843
 antitoxin transmission via, 8151
 auto-, of thyroid tissue in partially and completely thyroidectomized rats, fate, 9694
 of Bar locus into vermilion larvae, *Drosophila*, 1781
 behavior of pigmentoblasts in, bird, 8947
 compatibility of tissues, 11450
 of embryonic heart and eye in fish embryo, 8044
 embryonic tissue after exposure to low temp., survival, rabbit, 5962
 expts., transparent chamber for, 11417
 of eye disks, *Drosophila*, 90
 and eye facet number, bar mutant, *Drosophila*, 12541
 heteroplastic, of limbs, temp. as affecting, *Ambystoma*, 744
 parabiosis, incompatibility due to toxin of skin origin, 11451
 of somites, *Ambystoma*, 745
 homologous, of skin, 9673
 of integument in *Galleria*, pupation changes in, pupation hormones and, 13847
 of leg primordia of creeper embryos to normal embryos, fate, 13832
 of lethal hybrid tissue into non-hybrid embryos, 9773
 of mutant eye anlagen, *Drosophila*, 16198
 of optic discs and eye colors, *Bombix*, 7152
 of ovary, effect on crossing over, *Drosophila*, 7155
 on eye and egg color, *Bombix*, 7159
 of pigmented skin into defects in white skin, in various surface areas, guinea pig, 14996
 of skin, migratory behavior of epidermal cells in reference to surface polarity, frog, 11419
 of testis, effect on testis and vasa efferentia color, 7156
 of tissues, blood cell reactions and, 9631
 of tooth germ elements to marrow cavities in kittens, 14999
 of tumors. (See *Tumor*, *transplantation*.)
 of ventral skin between hairless and haired rats, fate, 9699
 Transplanting, of apple trees, recovery from, Vt. vars. compared, 4868
 of fruit trees, methods and time for, Ontario, 11995
 Transudates. (See *Exudates*.)
Transschelia (p.1862) *fusca*, nuclei, structure and behavior, 17494
pruni-spinosae, germination of teliospores, 3107
punctata, hosts among California spp. of *Prunus*, 14085
 Trap(s). (See under *Baits*.)
Trapa (p.1866) *† microphylla* (E), fruit, 10096
Trapezites (p.1876) *lutea* leucum, 5144
Trapezitinae (Lepidoptera), p.1876
 Trasentin, derivatives, as spasmolytics, pharm., 5784
 spasmolytic action, 4104
 Trauma. (See also *Injury*; *Wounds*.)
 and cancer, book, 13220
 continued, relation to skin cancer, rabbits, 13218, 13219
 effect on:
 carbohydrate metabolism, 3920
 intracranial tumors, 7828
 metabolism, guinea pig, 12795
 head, sagittal tearing of optic chiasma in, 9480
 leucemia transmissibility and, 4241
 non-penetrating, effect on heart, 16751
 Parkinsonism and, 7906
 relation to leucemia, 11336
 renal, treatment, 11088
 rôle in glomus tumors of penis, 14883
 shock, anaphylaxis pathology and mechanism compared, 17182
 in tumor production, 11276
Travista (p.1871), sp. descr., 1608
 Tree(s). (See also *Dendrology*; *Forest*; *Forestry*; *Shrubs*; under common and scientific names of trees; etc.)
 ash patterns of woods, 5588
 atavistic leaf forms, 11853
 standing against *Sezava*, coconut palms, 5017
 bark beetles, chemicals in sap for control, effects, 14125, 14126
 counting method for, 3199
 breeding, for disease resistance, 8934
 climatic races, European research on, 15652
 damage by insects, fungi and lightning, earth rays and, 14389
 diseases, in N. America, 15888
 distr., in Austria, 12012
 of bryophyte communities on, bark factors affecting, 1836
 exotic, cultivation in India, 10265
 in Netherlands, 4886, 12014
 famous, book, 3001
 firs, of Columbia River Gorge, ice and wind damage, 9021
 forest, canker and wood rot (*Polyporus glomeratus*), 3169
 nursery disease control, 3169
 growth, apical incidence in, 2917
 critical period, 10753
 rates in Bengal, 15281
 in relation to wood quality, 15656
 with roots, in 2 containers, method, stresses and strains, 13803
 hardy, for Michigan, 15680
 holes, fauna, 1881, 1883, 5377
 ice damage, 3501
 insect pests, hurricane as affecting, New England, 12205
 of Kansas, list, 1150
 lead and Zn as affecting, 1410
 line, in alpine regions of Java and Morocco, 7218
 in Carpathians (Rumania), 3503
 measurement. (See *Forest*, *mensuration*.)
 moss flora, zonation, factors affecting, 124
 ornamental, card file, 8506
 in parks and gardens of Lombardy, 8520
 pollen germination and viability, factors affecting, 8573
 racial variation in, 10266
 recovery from hail injury, 10241
 ring analysis, value in engineering, 14388
 root systems, extent and vol., 9028
 rooting of cuttings, factors affecting, 11991
 rootrot, as factor in shelterbelt planting, 14100
 seed source and geographic races, 10266
 seedling, growth, rôle of mycorrhizas, 15674
 shade, clonal types, relation to plant epidemics, 3169
 diseases, in U. S. A., 1938, 15890
 fertilizers for, method of application and effect on root system, 10219
 injury due to leaf-feeding insects and squirrels, Mass., 14124
 shelterbelts, *Cupressus* spp. as, Calif., 8510, 8514
 for orchards, construction, 15616
 virgin hardwood, conservation of tract, Minnesota, 3542
 water losses from trunks in various habitats, 10757
 of western N. A., book, 3019
Tremarhynchus (p.1870), synonymy, 6788
Trematoda (Platyh.), p.1869. (See also *Helminthiasis*; *Helminths*; *Parasites*.)
 in *Anopheles*, 10502
 in bass, effect on wt., 1556
 chapter, lab. manual, 10498
 in dog and cat, Egypt, 10480
 in ducks and geese, Canada, 1590
 in frog, biology, 12252
 in horses, Hawaii, 17897
 life histories, 3279
 redia, of *Diplodiscus temperatus*, 1592
 staining technic, 5259
 in urodeles, Louisiana, 6716
 variation in specific characters, *Brachycoelium*, 1598
Trematophaeria (p.1861), n. sp., 15435
 Trembling, sedation by acetylcholine, 14858
 Tremellaceae (Fungi), p.1862
 Tremellales (Fungi), p.1862
Treponema (p.1861) *carateum*, pinta caused by, 11633
 pallidum. (See also *Spirochaeta pallida*; *Syphilis*.)
 in body fluids of early vs. late syphilis, 15312
 in brain in general paresis, 17314
 chemotherapeutic action on, mechanism, 17245
 functional variations as influenced by habitat, 4607
 immunization to, animal trials, 13893
 as influenced by hibernation in hamster, 13598
 morphological variations in, 4706
 quantitation of inocula for exp. infections, 15285
 serologic reactions in rabbits to, 13893
 stain technic for, modified Kanzer, 9989
 pertense. (See also *Frambestia*.)
 strains inadequately determined, 4608
 recurrent. (See also *Borrelia r.*)
 agglutination by sera of Manchurian and Dutton types, 4469
 survival in liquid helium, 4659
 vincenti. (See *Borrelia v.*)
Triakonichidae (Arachnida), p.1874
Trialeurodes (p.1875) *porosus*, on *Zizyphus*, 3344
 vaporariorum. (See also *Whitefly*, *greenhouse*.)
 control in greenhouse, 1501
 2,2,2-Trialkyl ethanols, synthesis and anesthetic action, 544
Triathyris (Brachiopoda) (p.1871), (D), 16001
Triatoma, in trypanosomiasis transmission, 14165
Tribolium (p.1876) *confusum*, egg-producing capacity, as affected by egg consumption, 1834
 populations, crowding as affecting, 16249
 speed of movement in flour, 1508
Tribonema (p.1860) *bombycina*, from N. America, 13737
Tribonemaceae (Algae), p.1860
 Tribromoethanol, in anesthesia of lower animals, review, 1019

- anesthetic action, analeptics as affecting, 16765
effect on resistance to pneumococcal infection, 625
Tribulus (p.1866²), chemistry and morphology, 6549
Tricalysia (p.1867²) *lecomtana*, 6549
Trichadenotetrum (p.1875²), n. sp., 12414
Trichamoeba (p.1868²) *villosa*, crystalline inclusions, 3254
Trichiales (Myxomycetes), p.1861²
Trichina, antigens, active sensitization to, 15174
preparation and use of improved, 942
exptl. studies in guinea pigs, 12267
Trichinella (p.1870⁴). (See also *Trichinosis*.)
antigens, active sensitization to, 15174
in garbage-fed hogs, 6736
immunity to, nature and mechanism, 15176
incidence and diagnosis, 8699
larvae, alcohol as affecting, 6744
in rats, 17917
spiralis, chemotherapy of exptl. infections, 11596
discovery, 10686
epidemiology and control, 14195
immunity to reinfection, in guinea pigs, 17241
incidence in man, post-mortem studies, 3250
infection in man, dogs, cats, 16924
infestation, blood chem. during, 6751
larvae, heat as affecting, 10506
Trichinellidae (Nematoda), p.1870⁴
Trichinosis. (See also *Trichinella*.)
blood chemistry, 6751
diagnosis, 8699
digestion method, 8706
immunological methods, 14192
epidemiology, 14195, 17241
exptl. alcohol as affecting, 6744
chemotherapy, 11596
in guinea pig, 12267
in poultry, 8700
heat as affecting, 10506
history, 10698
in man, control, rôle of veterinarians in, 17922
incidence, 1559
in Chicago, 6737
of light infestation, 5092
post-mortem studies, 3250
Cleveland, 1551
of rat, blood picture, 1568
resistance, factors affecting, 14192
in San Francisco, 6736
therapy, review, 8713
Trichinuridae (Pisces), p.1879⁴
Trichurus (p.1879⁴) *lepturus*, blood cell morphology and blood coagulation time, 5884
Trichlorobenzene, as soil poison, for termites, 10463
Trichloroethanol, pharm., 9554
Trichloroethylene, in degreasing tanks, 15305
fate in body, 17559
Trichobius (p.1878²), tax., 3387, 18005
Trichocephalus trichurus, epidemiology, 6742
incidence, Indiana, 14176
Trichocerca (p.1871²), n. spp., 6805, 6807
Trichocercidae (Rotatoria), p.1871²
Trichodectes sphaerocephalus, on sheep, Sweden, 5091
Trichogramma (p.1878²) *minutum*, egg parasite of spruce sawfly, 12209
Tricholaena (p.1864²), leaf anatomy, 11916
Tricholepis elongata, *Puccinia* on, 8409
Trichomanes (p.1863²) *boschianum*, in N. Carolina, 17508
petersii, in S. Carolina, 17509
Trichomonad(s). (See also *Trichomonas*.)
in facial lesions of pig, 14166
growth requirements, 14166
Trichomonas (p.1868²). (See also *Trichomonad(s)*.)
in cecotomized chicks, 17909
in exptl. enteritis, turkey poults, 6735
intra-colonic heat therapy, 3240
batrachorum, cholesterol as growth factor, 14166
columbae, cholesterol as growth factor, 14166
foetus, in bovine abortion etiology, 15364
cholesterol as growth factor, 14166
culture on chick embryo, 3267
exptl. infections in chicks and chick embryos, 17900
gallinae, synonymy, 1585
hominis, incidence, Florida, 14162
intestinalis, with *Chilomastix*, in man, 1547
vaginalis, in public baths, culture, and factors affecting, 12274
Trichomoniasis, chemotherapy, rat, 542
Trichonema (p.1870²) *goldi*, in horses, Brazil, 1565
Trichoniscidae (Crustacea), p.1873⁴
Trichoniscus, albinism, 12828
Trichopeltaceae (p.1861⁴), taxonomy, 13733
Trichophytin, in dermatophytosis therapy, 4522, 17211
Trichophyton (p.1863²), guinea pig susceptibility, 11647
cerebriforme, comparative pathological and immunological relations of infections by this and other dermatophytes, 6203
glabrum, differentiation from *T. violaceum*, 4634
gypseum, comparative pathological and immunological relations of infections by this and other dermatophytes, 6203
growth, factors influencing, 972
asteroides, transfer from fox to man, 968
immersens, cultural characters, pathology and hosts, 4643
mentagrophytes, induction of mutations by monochromatic ultraviolet radiation, 16168
infection and allergy in guinea pigs by, 15271
violaceum, differentiation from *T. glabrum*, 4634
infection by, statistics in China, 9980
Trichophytosis. (See also *Trichophyton*.)
infection and allergy in man vs. guinea pig, 15271
Trichoptidae (p.1877²) *ostracea*, parasite of grasshoppers, 6898
Trichoptera (p.1876²), identification by sclerites of unemerged pupae, 3361
Trichosanthes (p.1867²) *anguina*, floral abnormalities, 15522
japonica, *Pseudoperonospora cubensis* on, 12121
Trichospermum (p.1866²), n. spp., and n. combs, 15498
Trichosporium symbioticum, on *Abies*, as cause of wood stain and insect relations of, 1428
Trichosporon (p.1863²), genus characterization, 4645
mycoses due to, 4645
Trichostomina (Protozoa), p.1868²
Trichostomum (p.1868²), n. sp., and n. combs, 4748
Trichostrongylidae (Nematoda), p.1870²
in intestinal nodules, cattle and buffalo, 10500
Trichostrongylosis, in equines, 15950
exptl., in sheep and goats, 14158
Trichostrongylus (p.1870²), spp. exptl. infestations, sheep and goats, 14158
in *Hydroptes*, 1604
in sheep, 5091
aeti, incidence and pathology, equines, 15950
in lambs, nutrition as affecting, 6728
cervarius from Chinese water deer, England, 1604
Trichosurus vulpecula, spermatorrhea in, 7578
Syphacia from, 14214
Trichuris (p.1871²), n. sp., 6807
Trichuridae (Nematoda), p.1870⁴
Trichuris sp. (p.1870⁴), in calves, control, 1562
in natives, Nigeria, 8690
ova, in Chinese, Canada, 12257
ovis, in sheep, Sweden, 5091
trichiura, incidence, Cuba, 6720
Tricladida (Platyhelminthes), p.1869²
Tricresol. (See *Cresol*.)
Tridacna (p.1872²), functional anatomy of bivalve, 10560
Tridacnidae (Mollusca), p.1872⁴
Tridesmostemon (p.1866²), flower fruit and distribution, notes, 1138
Triethanolamine, saponin-like action, 16772
Trifolium (p.1866²). (See also *Clover*.)
n. var., 1158
seed germination, temp. as affecting, 13999
incarnatum, culture, insect pests, and diseases, U. S. A., 2939
pratense, chromosome numbers in nodules and roots, 49
genes for flower color, linkage, 5323
Macrosporium commune on, vaccination expts. with, 17809
Trigeminal nerve. (See *Nerve*, trigeminal.)
Triglidae (Pisces), p.1880²
Triglonsis, distr. in Lake Michigan, 10620
Trigona (p.1878²), n. sp., 6928
Trigonulidae (Myriopoda), p.1873²
Trigonosema (p.1871²) *pectiniforme*, age, 16002
Trilactic acid, effect on intestinal flora, 2658
Trillium (p.1865²), major spirals in diakinesis in pollen mother cells, 1714
somatic chromosomes of, 7096
kamtschaticum, evidence for Neo-two-plane theory of bivalent constitution, 1708
nucleolus-chromosome relationship, 1707
Trilobita (Crustacea), p.1874⁴
Trimeresurus gramineus, venom, pharm., 18165
mucrosquamatosus, venom, pharm., 18165
Trimethylamine oxide, bacterial reduction, 11774
diffusion from udder, 18664
in fish muscles, 11758
Trimethylstibine, pharm., 18179
Trinetes (p.1879²) *maculatus*, invading Mississippi R., 3381
Tringa (p.1881²) *ochropus*, nesting, 16073
Trinucleidae (Crustacea), p.1874⁴
Tridion mitchelli, *Phyllachora* on, 8407
Trioxys sp. (p.1878²), parasite of aphid, Ont., 10451
Trioza (p.1875²), n. spp., 1631
Triphenylmethane dyes. (See *Fuchsin*; *Gentian violet*; etc.)
Triphleps (p.1875²) *bernardi*, 1627
Triplets. (See *Births*, multiple.)
Tripolite. (See *Infusorial earth*.)
Tripsicum dactyloides, as host of *Aplanobacter stewartii*, 6639
Trisetum (p.1864²), n. syn., 1158
Tristachya (p.1864²) *scaetia*, 11865
Tristemma (p.1866²), n. sp., 2328
Tristicha (p.1865²) *phascoides*, syn. of, 1049
Crassula clossana, 1049
Tristichopterus (p.1879²), from Greenland, 3235
Tristomidia (Platyhelminthes), p.1870²
Triteleda (p.1865²), defined, 6386
Triterpene, chemistry, 12049
Triticinae, amphidiploids in, induced by colchicine, 7134
Triticum (p.1864²). (See also *Emmer*; *Wheat*.)
Aegilops, *Aegilotriticum*, hybrids, of, progenies, 7128
Agropyrum hybrids, dominance and fertility, 1748
cells, as affected by acenaphthene, 16159
chromosomes, as affected by colchicine and acenaphthene, 16154
chromosome structure and behavior, 7099
colchicine and polyploidy, 1698
directed heritable variations conditioned by euploidy, 5320
dist. in relation to soil suction force, 12582
effect of phenylurethane on grains, 16156
genetics of quality, 69
hybrid, variation in somatic chromosome numbers, 43
mitosis, as affected by β -naphthyl-methylether and β -naphthyl-ethyl ether, 12503
-Secale hybrids, chromosomes, fertility, 1756
cytogenetics of non-amphidiploid derivatives of, 1749
inheritance of hairy neck, 1754
aegilopoides docteticum, susceptible to Hessian fly, 17872
politicum-Haynaldia villosa hybrids, crossing over between semi-homologous chromosomes, 7098
T. spelta hybrids, backcrosses of chromosome and endosperm development, 7130
timococcum, rust immunity of and value for breeding, 4993
vulgare, chromosomes in progeny of a haploid, 12509
Agropyron intermedium hybrids, fertility in, induced by colchicine, 14364
culm, duplication, 15524
T. glaucum hybrids, doubling chromosome number by heat, 12586
Triton (p.1880²). (For developmental material see also other genera of Caudata commonly used in experimental morphology, e.g., *Ambystoma*, *Salamandra*, etc.)

- Triton (continued)*
 induced secondary embryos, . . . 746
 induction of medullary structures in, . . . 15082
 iris transplants, with and without retina, regeneration, . . . 5959
 morphogenesis, analysis, . . . 752
 alpestris, inductive capacity of liver and kidney transplants in gastrula, . . . 748
 melanism in, . . . 10630
 palmatus-Salamandra maculosa, T. palmatus-S. atra hybrids, mitosis in, . . . 10738
 taeniatum, lens transplants in, morphogenesis, . . . 17053
 pronephric duct, development, . . . 2444
 Trituration, of bacteria, ball mill for, . . . 17163
Triturus (p.1880²), anus formation in, . . . 4391
 grafted pigment cells, behavior, . . . 13337
 induction of secondary neural plate by inorganic implantation, . . . 754
 liver cells, mitochondria in, . . . 11426
 nerve regeneration, . . . 657, 11375
 pyrrhogaster, development of limb rudiments, . . . 5961A
 torosus, epithelial hypophysis and infundibulum developmental relationship, . . . 15076
 living egg during first week of development, . . . 7114
 regulatory development, . . . 8046
 thyroid implants, metabolism and, . . . 11415
 viridescens, induced metamorphosis and reproduction, . . . 16058
 pituitary implantations as affecting, . . . 9357
 vulgaris, larvae, diet for, . . . 2009
 Triuridaceae (Monocotyledones), p.1864²
 Triuridales (Monocotyledones), p.1864²
 Trochilidae (Mollusca), p.1872¹
 Trochilidae (Aves), p.1881³. (See Humming birds.)
Troglaradillidium (p.1873⁴) *trebinjanum*, redescribed, tax., . . . 12336
Troglodactylus beranecki, in Germany, . . . 12308
TROGLOCYPEONISUS (Crust.)
 (p.1873⁴), n. sp., . . . 12336
Troglodytes (p.1881⁴) *t. troglodytes*, bird banding, . . . 14296
Troglodytidae (Aves), p.1881⁴
Troglotrematidae (Platyhelminthes), p.1870²
Troglolaphysa (p.1875¹) *millist*, . . . 14277
Trogon (p.1881⁴), food habits, . . . 9064
 Trogonidae (Aves), p.1881⁴
 Trogoniformes (Aves), p.1881⁴
Trogophloeus (p.1876¹), n. sp., . . . 6866
Trochilidae, predator on *Lygaenonematus*, . . . 5051
Trombicula (p.1874²), n. sp. from New Guinea, . . . 17980
alfredugesi, proper name of American chigger, . . . 17979
hirsti, as vector of typhus, . . . 934
 Trophocidae (Dipterodones), p.1866¹
Tropaeolum, fat in seed, chemistry, . . . 10292
 intercellular leaf volume determinations, . . . 6451
majus, genetic of, . . . 16189
 virescence and phylloidy, . . . 15522
 Tropaeic acid, mydriatic action, . . . 16773
 Tropic acid, mydriatic action, . . . 16773
 Tropics, disease control problems, . . . 4665
 effect on blood pressure and pulse of whites, . . . 5908
 skin pigmentation and, . . . 5908
 sub. need for sanitation, . . . 6723
Tropometra enervis, n. sp. ectoparasitic annelida on, . . . 3290
Myosoma on, . . . 3289
Tropism(s). (See also Behavior; Growth; Movement; Polarity; and inducing factors, e.g., Light.)
 of *Cercaria*, . . . 17948
 chemo-, of leucocytes to streptococci, antibodies as affecting, . . . 13407
 negative, of leucocytes, rabbits, . . . 5819
 in seedlings, organic acids as affecting, . . . 15760
 in *Cucumis* and *Avena*, relation to auxin, . . . 1358
 in fresh water jellyfish, . . . 3275
 galvano-, (See also Cataphoresis.)
 in fish, . . . 3997
 geo-, (See also Gravity.)
 effect on dorsoventrality, fern prothallia, . . . 17699
 in roots, mechanism, . . . 4921
 organo-pharmacological, . . . 16797
 oscillo-, in fish, . . . 3997
 photo-, in animals, problems and theories, . . . 2192
 in *Avena*, hormones as affecting, . . . 8568
 in *Cyclops strenuus*, . . . 12616
 in *Daphnia*, . . . 2193
 in *Helianthus*, factors affecting, . . . 6615
 in house fly, different wave lengths as affecting, . . . 6702
 relation to provenience, in seed testing, . . . 8937
 in tadpoles, chemicals and pH as affecting, . . . 7615
 of roots, hormones as affecting, . . . 6573
 in rye, rôle of auxin in, . . . 6565
Tropisurus (p.1870³) *fissispinus*, in water birds, . . . 3246
Tropocyclops (p.1873³) *prasinus*, n. ssp., . . . 6844
 Trout. (See also Salmo; Salvelinus; Trutta.)
 breeding habits, . . . 5158
 brook, age and growth in breeder streams, . . . 10807
 culture, in Ceylon, . . . 12624
Diphyllobothrium plerocercoids in, Calif., . . . 12253
 egg production and altitude, . . . 10622
 epidemic due to *Proteus vulgaris*, . . . 15375
 food preferences, method of measuring, . . . 16279
 growth characteristics of 4 spp., . . . 16466
 planting, in exptl. streams, methods, . . . 10809
 research and management methods, book, . . . 7239
Salmonella infection, . . . 15375
 sestonosis in, . . . 6254
 stocking of streams, . . . 14407
 transportation, method, . . . 16282
 two-headed, . . . 15086
 ulcer disease, . . . 15391
 Truck crop(s). (See Vegetables.)
Trudis (p.1880²) *bassensis*, *westraliae*, . . . 6974
 Truffles. (See also Tuber.)
 monograph, . . . 8390
Truncatellidae (Mollusca), p.1872¹
 Trutta. (See also Trout.)
 food habits, . . . 151
 Trypan blue, effect on immunity to Shope fibroma virus, . . . 16845
 on rinderpest goat-blood virus, . . . 13594
Trypanosoma (p.1868³), cultivation in chick embryo, . . . 15963
 incidence, wild birds, . . . 17901
 avium, from Nebraska birds, . . . 3257
 brucei, effect on plasma proteins, diet and, . . . 1552
 exptl. infection of chickens and chick embryos, . . . 1541
 infections, germanin therapy, smallest protective dose, . . . 11608
 pressure effects on morph., virulence, etc., . . . 1063
 congolense, canine infection and germanin therapy, . . . 4680
 effect on plasma proteins, diet and, . . . 1552
 immunization of cattle to, . . . 944
 infections, surfen-C therapy, . . . 6155
 crust. carrier cases, . . . 14173
 immunity to exp. transmission from mother to offspring, . . . 15177
 preservation of viable forms, . . . 12255
 resistance to, age as affecting, . . . 9910
 seasonal variation, rat, . . . 10497
duttoni, ablastic and trypanocidal antibodies to, . . . 945
equiperdum, infections, germanin therapy, . . . 6135
 serum complement in, . . . 17238
 serum K level and, rat, . . . 5097
 sulfanilamide therapy, . . . 4568
 resistance to, factors affecting, . . . 9911
 mononuclear response and, . . . 9911
evansi, in bovines, Hyderabad State, . . . 17903
 in horse, exptl. studies, Bulgaria, . . . 12259
gambiense, duration of infection, . . . 14169
 exptl. meningo-encephalitis, . . . 1542
lewisii, blood response, in infected rats, . . . 4545
 immunization to, age as affecting, . . . 4544, 9908
 resistance to, age as affecting, rat, . . . 4545
 transmission from rat to nursing young, . . . 9909
rhodesiense, chemotherapeutic reactions of relapsing-fever spirochaetes vs., . . . 13542
 exptl. infections, germanin therapy and, . . . 14170
 infectivity to man, antelope passage as affecting, . . . 12247
Trypanosoma (continued)
rhodesiense (continued)
 pathogenicity in white rats, . . . 6724
 in sheep and antelopes, . . . 15954
thelleri, in bull calf, India, . . . 17903
uniforme, differentiation from *T. vivax* in mixed infections, . . . 8692
viennae, in cows, Surinam, . . . 15979
vivax, differentiation from *T. uniforme* in mixed infections, . . . 8692
 Trypanosomatidae (Protozoa), p.1868¹
 Trypanosome(s). (See also Trypanosoma; Trypanosomiasis.)
 cultivation in chick embryo, . . . 15963
 electric charge in tsetse fly, . . . 6718
 immunological group reactions, . . . 945
 by germanin, . . . 13543, 15210
 mammalian, kinetoplast in diagnosis, . . . 8718
 morph. and taxonomy, . . . 8692
 pathogenic, metabolism of infected host vs., . . . 4709
 staining, . . . 1584
 survival in liquid helium, . . . 4659
 Trypanosomiasis. (See also Trypanosoma.)
 in Africa, present status, . . . 15962
 American, transmission, . . . 14165
 bovine, in Rhodesia, . . . 2717
 surfen-C therapy, . . . 6155
 in Surinam, . . . 15979
 carbohydrate metabolism in, . . . 4709
 chemotherapy, interference phenomena in, . . . 824
 effect on blood picture, . . . 825
 exptl., in domestic fowl, . . . 1541
 meningoencephalitis in, . . . 1542
 germanin therapy, effects, . . . 14170
 in horse, Europe, . . . 12259
 immunization, . . . 944
 of livestock, wild animals as carriers, . . . 8321
 in man, S. Rhodesia, . . . 14161
 plasma protein changes in, diet as affecting, . . . 1552
 rat, rôle of K in, . . . 5097
 resistance to, age as affecting, . . . 4544, 4546
 hypophysectomy as affecting, . . . 3882
 treatment as affecting, Nigeria, . . . 8698
 in Uganda, . . . 2718
Trypanothyncha (Platyhelminthes), p.1870³
 Tryparsamide, cerebro-spinal fluid trypanocidal after, . . . 2304
 dermatitis due to, . . . 4559
 tolerance to, . . . 14826
 Trypetidae (Lepidoptera), p.1877⁴
 Tryptone, gelatin-, anaphylactic responses to, . . . 9875
 Tryptophane, detn., . . . 218
 effect on growth of isolated bean embryos, . . . 14006
 N-methylated, availability, 12804, 12806
 in tumors and normal organs, rats, . . . 4227
 typhoid bacillus growth and, . . . 11790
 Tsetse disease. (See Nagana.)
 Tsetse fly. (See Fly, tsetse.)
 Tsuga. (See also Hemlock.)
 Tsutsugamushi disease, virus, use in treatment of syphilitic mental disease, . . . 7659
 Tuba root. (See Derris.)
Tubaria phaeophylla, lichens on, . . . 8416
 Tube(s), hematocrit, . . . 10874
 Tuber(s). (See also under tuber-bearing plants, e.g., Potato.)
 cell adhesion in potato, temp. as affecting, . . . 1026
 formation in *Helianthus*, rhizomes as affecting, . . . 1411
 in potato, factors affecting, . . . 14004
 tissue of potato, permeability, heat as affecting, . . . 1027
Tuber (p.1862²) *aestivum* and *T. brumale*, sexual processes, . . . 4735
 Tuberaeae (Fungi), p.1862²
 Tuberales (Fungi), p.1862²
 monograph, . . . 8390
 Tubercle(s), root. (See under Legumes; Root.)
 Tuberculariaceae (Fungi), p.1863²
 Tuberculin(s). (See also Mycobacterium tuberculosis; Tuberculosis.)
 from acid-alcohol-fast bacillus from water, . . . 2746
 allergy and immunity, after repeated BCG conjunctival-sac applications, . . . 17220
 surgical operation as affecting, . . . 6096
 desensitization therapy, of tuberculosis, . . . 13512
 index in Italian children in Tunis, 1002
 Koch's old, antigenic potency in vivo, . . . 8149

SUBJECT INDEX

Tuberculo-Tularemia

like-reaction, to aldehyde from tubercle bacilli, 13704
O.T., diluent for stabilizing for Mantoux test, 834
old, reactions to purified protein derivative vs., 15161
patch therapy, 17214
preparation, 6251
proteins of acid-fast bacteria, precipitins for, 9970
reaction, in children, 13193
in exp. infection by bovine tubercle bacilli, 9852
in Hodgkin's disease, 13248
intradermal, diagnostic value in children, 15275
Mantoux, in uveo-parotid fever and Boeck's sarcoid, 4203
negative, in children vs. adults, 13439
patch, evaluation, 4435, 17358
patch vs. Mantoux tests, 15287
in children, 15277
persistent positive in adults, significance, 9973
purified protein deriv. vs. O.T., 16827
scarification vs. intradermal, 13439
statistics, in large city, 15298
vit. C and, guinea pigs, 7890
in wild vs. captive mammals, 6253
reactor curve, vs. death rate in pulmonary calcification, 11523
sensitization, and antibody formation, by killed tubercle bacilli, mon-keys, 11520
by heat-killed tubercle bacilli, in children, 17134
in skin testing, 2562
tuberculosis detection by forms, 17369
Tuberculo-protein(s). (See under Protein.)
Tuberculosis. (See also *Mycobacterium tuberculosis*; *Paratuberculosis*.)
absent in potter's silicosis, 11364
allergy and immunity in exp., 8102
without infection, 900
anemia, Fe therapy, 7875
in anthracite miners, 14935
antibodies, heterogenetic, 2543, 4458
in serum, 9833
antigens common to tumors, pus and bovine caseous material, 813, 814
avian, monograph, 6231
bacillema in exp., in dogs, 9965
periodicity, 14914
basal metabolism variations, children, 14871
basophilic erythrocytes, Pb exposure and, 5875
blood picture in, vit. C as affecting, 327
blood supply in lungs, 615
body-wt. curves in guinea pigs with, 8227
Boeck's sarcoid and uveo-parotid fever due to, 2363
bone, leucocyte count in, 16960
bovine, cats susceptible to, 13665
as cause of abortion, 4237
in goats, 15356
incidence, in man, 6187
stable conditions and, 4674
types and, Sweden, 2690
of uterus, methods of contagion, 2704
caseation in, hypersensitivity, and, 829
case-finding, in large city, 15298
methods, 13649
in schools, 15290
caseous substance, Forssman antigen in, 6042
cavities, healing, path., 7865
pulmonary aneurisms, path., 4055
childhood forms, 17199
choline esterase in serum in, 7553
control, in industry, 13283
organization in Brazil, 13636
cutaneous, in cattle in Sweden, 2690
rubrophen therapy, 6156
degree after BCG-immunization and re-infection in allergic and iatrogenic state, 8102
dementia precox and, review, 2416
diagnosis. (See also *Tuberculosis*, *sero-diagnosis*.)
by culture vs. animal inoculation, 13631, 13632
by fluorescence microscope, 8225
by fluoroscopy, in group surveys, 17369
by guinea-pig inoculation, 11666
by sputal culture and exam., 15284
by sputum exam., technic, 8255
in domestic vs. wild animals, 11750
effect on:
Hb metabolism, 11328
pneumococcus infection, rabbits, 628
serological reactions in syphilis, 17340

Tuberculosis (continued)
electrocardiographic study, 14765
endocarditis of pulmonary valve due to, 6190
epi. morbid anatomy, 619
epidemiology, 2683, 8241
in Americans vs. Mexicans, 985
in tropical and subtropical natives, 11715
extrapulmonary complications, 13244
healing, latency and progression, 13247
history, 4662, 10697
immunity to, mechanism, 8123, 8129
specific antiserum reactions not demonstrating, 2525
immunity relations, in auto- and hetero-reinfections, 9886
mononuclear phagocyte mobilization and capacities in normal vs. immunized animals, 8129
immunization, by BCG, 17196
in calves, 11569
multiple-puncture method, 13473
single vs. fractional doses, 13433
by heat-killed tubercle bacilli, 9879
by killed paraffin-coated tubercle bacilli vs. BCG, 15158
prophylactic, not recommended, 11560
incidence, in cats and dogs, 8297
diagnosis in young adults and, 11710
in industrial dust hazards, 13276
13280
in industry, 11369
in medical students, Univ. of Copenhagen, 2380
in negro schools vs. population, 978
progressive, 2689
in relief population, x-ray detn., 13645
on a Scandinavian island, 2386
incipient, cardiodynamic studies, 4087
infection and reinfection, post-mortem study, 8241
inflammatory exudates as affecting course of exp., 9966
as influenced by:
coli-vaccine, 2560
estrogen, 14627
preventing hypersensitivity, 829
radium mining, 7848
thoracoplasty, 2382
influenza mixed infection, Abderhalden reaction in, 9826
intracutaneous reactions against specific antisera in, 2525
of kidney, human vs. bovine bacillus incidence in, 13603
laryngeal, relation to pulmonary and oral forms, 17321
leucocyte counts in, value, 10901
of major bronchi, diagnosis, 16892
mastitis, bovine, 8164
miliary, resemblance to broncho-moniliasis, 14917
monocytosis in, 4236
morbidity and tuberculin indexes, of Italian children in Tunis, 1002
morphine alkaloids in, 2293
mortality, climatic and socio-economic factors in, 10756
in industrial populations, 11682
rates, 16903
sex differences, 980
statistics, 8281
non-caseating, Boeck's sarcoid type, 16897
oral, 17361
oxygen tension and, 17459
nature of mineral particles in ash, 2420
in negroes, economic, racial and constitutional aspects, 6221
nutrition and, 2378
in origin of rheumatism, 5822
parahilar, study, adults, 13243
pathogenesis, vit. C and, guinea pig, 7890, 7891
in pigs, incidence and path., Bulgaria, 15359
transfer in feeds, 4675
pneumoperitoneum in, 12918
in poultry, 1012
helminths and, 6749
primary, in adults, clin. and epidem. aspects, 11697
path., 4239
in children, course, 10009, 13193
effect on exptl. pulmonary tuberculosis, rabbits, 2376
types, post-mortem study, 8241
protective ferments in, effect of reducing substances on activity, 5448
pulmonary infiltrations with eosinophilia resembling, 4455
radiology, book, 7860

Tuberculosis (continued)
reactions to tuberculo-protein and phosphatide, 912
relation to Hodgkin's disease, 13243
to silicosis of spleen, 14984
in renal amyloidosis, lesions and, 7859
resistance to, bacterially associated factors in, 8152
host associated factors in, 8153
role in hemopneumothorax, 16890
"Sacco phenomenon" after revaccination, 17197
Schiff-Auerbach phenomenon and, 7870
serodiagnosis. (See also *Tuberculosis*, *diagnosis*.)
in autopsy blood, methods compared, 812
by complement deviation reaction, 4445
by complement fixation, vs. precipitation, 9833
Witebsky method, 13624
statistics, 6061
by W. K. K. antigen, 8126
Wassermann test recommended in, 6061
of destructive changes in organs, 6040, 6041
Kodama precipitin reaction compared, 17345
Mantoux test, diluent for stabilizing O.T. for, 834
Meinicke reaction modified, 874
patch vs. Mantoux tests, 15287
children, 15277
patch vs. scratch vs. Mantoux tests, 15290
patch vs. von Pirquet tests, 17199
in primates, 2601
serological reactions of exptl., 4445
severity, numerical expression, 13601
in sheep, types, 15355
skin tests in, value for epidemiological index, 8127
spontaneous in rhesus monkeys, 11703
sputa, prep. for culture or inoculation, 13623
statistics on exam., 13632
survey, in Jamaica, 932
susceptibility to, allergy indicating, 8102
therapy, with Ca creosotate, man, 9546
chemo., 15189
of exp., 13554, 17257
of mammalian and avian forms, 11603, 11604
gold- and artificial pneumothorax, criticism, 7533
with prontosil, 4567
with sulfanilamide, 2828, 2659
4551, 6143, 9920, 14920
by tuberculin desensitization, 13512
tuberculin-patch, 17214
use of *Artemisia* spp. in, 1335
of thyroid, clin-path., 5853
tonsillar, incidence, origin, 13241
tracheobronchitis due to, case studies and therapy, 13245, 13604
postmortem incidence, 13642
transmission between man and domestic animals, 8295, 8297
tuberculin patch test for, evaluation, 17358
intradermal, diagnostic value in children, 15275
type differentiation, 6231
bovine vs. human, by vole inoculations, 4626
types and incidence, in Jamaica, 1007
"Vacunal" prophylaxis and therapy in children, 17148
vit. A in liver in, man, 16503
in wild vs. captive mammals, 6253
Tubifex (p.18714) *tubifex*, energy consumption, 14398
vital stain reduction gradients in relation to injury, 11467
Tubificidae (Annelida), p.18714
Tubiferae (Dicytyledones), p.18671
Tubularia (p.18692) *crocea* hydranth formation, temp. as affecting, 7624
regeneration after removal of perisarc, 5973
Tubulidentata (Mammalia), p.1883
Tubulovesicula (p.18694) *pseudorhombi*, 6303
Tularemia. (See also *Pasteurella tularensis*.)
diagnosis, by blood culture, 17352
in human breast, 9967
incidence in hares, Alaska, 4681
Rocky Mountain wood ticks as vectors, 11689
in rodents, 6243

Tularemia (continued)
 septicemia, meningitis and, vs. miliary tuberculosis,7863
 tick tests, Alaska,1564
Tularemia (p.1862) sphaerospora,11820
Tulip (s). (See also *Tulipa*)
 breaking a complex infection,16905
 leafspot (*Fusarium avenaceum*),15796
 mosaic (virus), analysis and properties,1439
 cucurbit virus 1 from,1434
 in *Lilium longiflorum*,3169
Phytophthora spp. attacking,1418
 x-ray treatment of bulbs, effect on growth and *Botrytis* disease,1466
Tulipa. (See also *Tulipa* (s))
 polyploidy in spp., chromosome behavior,16190
 Tumors, adenocarcinoma, with cirrhosis, dog,15376
 ethmoid bone, sheep,13217
 structure, metastases and,7822
 of uterus, transplantation, rabbit,5809
 adenofibroma, of mammary gland, theelin as affecting, rats,597
 adenoma, epizootic pulmonary, relation to verminous pneumonia and jaagsiekte, sheep,17386
 of hypophysis, estrin and,5813
 of intestine, studies, pig,11277
 lungworm infestation and, sheep, Great Britain,17918
 of pancreas, with hyperinsulinism,16871, 16929
 of pancreas and pituitary, in chronic hypoglycemia,14880
 of parathyroid gland, case,586
 renal calcification and,7836
 of pituitary,614, 11285, 16877
 of prostate, testosterone as affecting,14969
 of pylorus, due to *Capillaria*, field mouse,12266
 path., mice,2372
 renal, rabbits,4191
 sebaceous, histol. changes in tuberculous sclerosis,2407
 of adrenal cortex, disturbances of carbohydrate metabolism and, 587
 of adrenal gland, diabetes of bearded women and,9657
 and hypertension,4092
 ameloblastoma, solid to cystic degeneration,14903
 angioma, Mg therapy,16860
 of retina,2365
 angiomatosis cerebri, case,616
 pathogenesis, symptomatology, 2370
 angiotriculoendothelioma, 11279, 11644
 antigens common to tuberculosis and pus and,814
 argentamine (carcinoid), in ovarian teratomas,14908
 in small intestine, clin., therapy, 5799
 arrhenoblastoma, simulating Cushing's disease,14956
 astrocytomas, of cerebellum, anat.,16841
 of bladder, value of cystography, 4202
 blood cholesterol in,4243
 of bone, sex-difference in incidence, mice,601
 book,13226
 of brain, alexia and agraphia and, 7841
 intracranial pressure in,16407
 Shope rabbit papilloma virus and,9600
 vs. vascular lesions, diagnosis, 4059
 Brown-Pearce, antigens common to pus and,813
 estrogens as affecting, rabbits,596
 metastases, distr.,5814
 factors affecting,5802, 5803
 organ immunity, rabbits,4200
 serological specificity,6043
 x-ray as affecting,16320, 16325
 carcinoma, of adrenal cortex, pseudo-sexual precocity and,5860
 antilytic factor, spectroscopy, 4181
 blood in inhibition of yeast fermentation by,5516
 bone metastases and sedimentation rate and,7839
 campaign, in Germany,9531
 of cervix, behavior of cervical cells,577
 latent period, therapy, relation to leukoplakia,2369
 metastases, with Charcot-Adams-Stokes syndrome and oculogyric crises,4211
 new classification,9584

Tumors (continued)
 carcinoma (continued)
 chemotherapy, glycolysis and respiration and,11278
 choline esterase in serum in,7553
 in chronic ulcerative colitis,16868
 detn. of malignancy,11301
 diagnosis, Abderhalden test,5798
16882
 digestive tract, irradiation and, 14890
 oxidized fats and, rats,9592
 Doyen micrococci or "Glover organism," in blood stream,2358
 effect on erythrocytic glycolysis, value,14898
 epidermoid, of breast, with metastases,579
 of esophagus, statistical study, 13199
 etiology, biological considerations,4199
 of eyelids, course and therapy, 14897
 of frog, manner of growth,14894
14895
 genesis,9582
 hopeful factor in,16867
 as influenced by:
 dichlorophenolindophenol,11298
 fluorotyrosin,7843
 heredity,4180
 hormones, ovary and uterus, mice,7837
 in Jewish race,9599
 vs. leukemia, tissue autolysis and,9586
 life insurance and,16855
 of liver, child,11283
 histopath.,14893
 hyperpolypeptidemia in,7344
 liver feeding as affecting, rats,4214
 of lungs, in generator gas workers,4205
 in radium miners,7848
 relation to infections,14885
 tobacco and,13216
 lysis of cells by serum, cholesterol esters and,7825, 7826
 mammary, cat,4204
 culture, rats,5807
 cystic cerebral metastasis,7858
 foster nursing as affecting, mice,16832
 functional activity and,16834
 incidence, mice,14876
 influences, mice,16887
 and lung, mice,9583
 in males,4192
 metastatic calcification,2354
 production, with estrone, ♂ mice,7857
 with methylcholanthrene, 11300
 radiotherapy,9593
 surgery and irradiation,4183
 tar wart and cancer development and, mouse,7823
 testosterone as affecting, mice,9590
 variation in incidence, mice,598
 x-ray therapy,14887
 metastasizing, on autotransplantation of breast tissue,16856
 metastatic to stomach, incidence,7847
 mortality, statistics for Bavaria, 4207
 trends,11297
 in osteomyelitis,16869
 of ovary, genetic and endocrine studies,609
 of pancreas, body and tail, clin. path.,14879
 study,11280
 polarographic serum study,13234
 postprandial blood sugar in,14496
 primary, of hepatic ducts,7854
 producing agents, effect on *Escherichia communior* growth,13703
 potency of,16858
 of prostate, diagnosis and metastases,7855
 mucus production and malignancy,7849
 new bone formation,14873
 resistance to,11275
 serodiagnosis by Freund-Kaminer reaction, chick embryo cells for,9869
 serum phosphatase conc. in,11274
 of skin, actinic radiation as affecting,4179
 papilloma virus as affecting, rabbits,588
 location and therapy,4195

Tumors (continued)
 carcinoma (continued)
 of skin (continued)
 sites and geographic variations in,13227
 sunlight and,4210
 of skin and bronchus, in tar worker,16870
 statistical analysis,9585
 Kiel and Göttingen,4212
 of stomach, acanthosis nigricans and,4226
 arginase activity,9588
 blood and urine NaCl after test meal in,12887
 effect on bone marrow,11308
 lack of liver antianemic principle in,3763
 lymphatic dissemination,7845
 perforated, streptococcal sepsis in,17289
 relation to gastritis and dental prosthesis,13228
 structural relations,604
 transmission, mice,4178
 in the U. S. Navy,4216
 and venous thrombosis,16880
 cells, cytology,4187
 differential staining, nucleoproteins and, rat,7838
 preservation in frozen state, mice,573
 in serous effusions,5812
 viscosities,3446, 4198
 cerebral, with mimic paralyses of facial nerve,16872
 chemoantigens and carcinogenesis,16852
 chicken virus, transmissibility, 14904
 chicken virus-I, azoprotein enhancing effect,11521
 extract, chick embryo extract and,576
 cholesterol in, irradiated rats, 11290
 chordoma, vertebral column,13204
 chorionepithelioma, gonadotrophic hormone in urine in,9640
 hormonal relationships,2368
 of testis,2366
 in chuckawalla, *Bacterium saurovalli* causing,11728
 colloid, third ventricle, path.,16873
 congenital sacro-coccygeal as monozygotic twin of patient,15088
 connective-tissue chemically-induced, virus in, fowl,7842
 cystadenoma lymphomatosum, in branchial pouches,7833
 deciduomata, production during lactation, rat,7594
 diagnosis, by blood culture,2358
 Gordon biological test, in lymphadenopathies,608
 of duodenal papillae,3743
 effect on hypophyseal melanophore hormone,4221, 4222
 on reticulo-endothelial system of spleen, rats,4225
 embryonic sympathoma, of adrenal gland, metastases to lungs and brain, hist.,5805
 endocrine factors and, mice,4269
 of epididymis,4193
 epithelioma, caused by benzpyrene, 589
 implantation in stomach, rabbits,16836
 erythrocyte cholesterol in,7335
 extracts, in vitro production of anti-substance to,3863
 linkage with Thorium B, selective deposition, mice,4189
 of ♀ sex organs, statistical analysis, Belgrade,13206
 fibroadenoma, of mammary gland, folliculin-treated, hist.,4229
 fibroleiomyoma, uterus, metastases,7356
 fibroma, of intestine,2367
 in psoas fascia, guinea pig,4208
 rabbit, virus transformation to that of myxoma negative,11549
 Shope, azoprotein enhancing effect on,11521
 serological relation to myxoma,9868
 fibromyoma, of uterus, and associated lesions,16864
 estradiol as affecting,14892
 fibrosarcoma, of bone, methylcholanthrene induced,16840
 ganglioneuroma of cervix, case,578
 gastric secretion in extragastric malignancy,12648

SUBJECT INDEX

Tumors

Tumors (continued)

- glioma, of optic nerve, clin.-path., 14902
- of pons, clin.-path., 16829
- structural development, 604
- glomeruloma, of kidney, hist.-path., 7846
- glomus, on penis, path., 14883
- granulation, in fish, 2711
- growth, as influenced by
 - aldehydes and glucosides, mice, 5801
 - 3-4 benzpyrene, Na cholestenon-sulphonate and, 7851
 - colloidal metals, 13225
 - excision and reimplantation, rats, 11282
 - heparin, 14884
 - heptaldehyde, 570, 13032
 - hypophysis, 4219
 - metastases and mice, 583
 - and transmissibility, x-rays as affecting, mice, 5800
- of hand, solar irradiation and, 9597
- of heart, pericardium, metastatic, incidence, 13230
- hemangioma, cavernous, effect on heart size, 5724
- hematoma, of iris, case, 7881
- hepatoma, cathepsin in, rat, 4206
- production with dimethylaminoazobenzene, rats, 4215
- heterotransplanted, anaerobic glycolysis, 13231
- homologous material vs. testicle extract factor, 16844
- hypernephroma, effect on hair growth, 9654
- immunity, theelin as affecting, mice, 14899
- x-rays as affecting, rabbits, 16845
- incidence in India, malignancy, 7844
- mammectomy and, mice, 7832
- in Nuremberg and Kiel, 13214
- restricted diet and, 14555
- sex difference in, 16465
- as influenced by:
 - bacterial carbohydrate complexes, rats, 4196
 - carcinogens and related substances, mice, 584
 - high fever temp. in vitro, 16816
 - ox bile and estrin, 16865
 - phenanthrene derivatives, 16884
 - sulfanilamide, mice, 14883
 - surgery, 14883
 - water-soluble vitamins, 11291
- inheritance, 16861
- mouse, 3463
- inherited cuticular in *Drosophila*, x-rays as affecting, 8055
- intracardiac, with signs of valvular heart disease, 612
- intracranial, hemorrhage into brain stem and, 7829
- trauma and, 7828
- invasion of pulmonary veins and left auricle, 9589
- of kidney, frog, virus, metastases and transplantation, 2364
- knowledge to 1750, book, 13220
- of larynx, in horse, gross and histopath., 4686
- leiomyofibromatosis, of abdomen and pelvis, 16853
- leiomyoma, of iris, case, 7831
- of oral cavity, hist., 2373
- leiomyosarcoma, of duodenum, 16850
- in leucemias, 4241, 4255
- classification and, 4251
- lipogranuloma, tissue reactions in, 12819
- lipomatosis, in central nervous system of infant, 569
- liposarcoma, serology, guinea-pig, 5806
- of liver, carcinoma associated with *Fasciola hepatica* and *Dicrocoelium*, 2362
- vit. A in, rats, 11286
- of lung, blood supply, 615
- pneumectomy in therapy, 7852
- lymph node metastases, effect on ascites cancer, mouse, 13229
- lymphoblastoma, leucemic, calf, 608
- lymphocystic virus-induced, in fish, 11629
- lymphocyctoma, in pig, 15368
- lymphogranuloma. (See also *Hodgkin's disease*)
 - in Mikulicz's syndrome and uveoparotid fever, 4197
- lymphoid, colchicine as affecting, mice, 591
- lymphoma, avian, etiology, 6228
- bovine, etiology, 6228

Tumors (continued)

- lymphoma (continued)
 - multiple. (See *Hodgkin's disease*)
 - P metabolism in, rat, 9171
- lymphomatoid, spinal epidural space, 16839
- lymphosarcoma, induced, transplantation, mice, 590
- splenic transplantation as affecting, 13213
- malignancy, electrical insulation and, rats, 4224
- malignant, etiology, chemistry, 14889
- glutamic acid and, 14882
- transplantation, chap. in book, 5952
- mammary, complex and malignant, 9598
- endocrine gland changes, 16857
- heptyl aldehyde as affecting, mice, 16881
- and methyl salicylate as affecting, 2374
- inheritance, rabbit, 13203
- pedigree relationship, mice, 16838
- plasma cell granuloma, amyloidophilic, 11296
- in man, animals, and plants, 7850
- mediastinum, effect on venous pressures, 4077
- melanoma, mortality rate, U. S. Navy, 4216
- melanosarcoma, melanotic disease of fishes and, 582
- melanotic, anat.-clin. observations, 4218
- disease of fishes, progressive growth stages, 582
- in hybrid fishes, genesis, 16854
- metabolism, growth rate and, 11278
- metastasis, factors, 13212
- from implanted lesions, study, 13203
- mixed, of kidney, child, 11287
- of lacrimal gland, metastases, 7853
- morphology, hydrocarbon induced, mice, 14877
- mortality, from cancer, Argentina, 13222
- racial survey in Switzerland, 4194
- trends, 11702
- multiple malignant, antagonism in development, mouse, 7823
- lower bowel, 16833
- in sarcoma strain of mice, 602
- myeloma, "albumen" crystals in serum in, 1954
- anticomplementary serum, 4249
- backache in diagnosis, 571
- crystalline Bence-Jones protein in blood and urine, 14901
- multiple, review, 5831
- uterine, effect on sterility, 2360
- myelomatosis, aleukemic, transplantable in rats, 1979
- myxomatosis. (See *Myxomatosis*)
- neurofibroma, grafts, in mule, 15881
- neurogenic, from sacrum, clin.-path., 16828
- sympathetic nervous system, 2375
- nomenclature, revision, 4220
- of omentum, glomangioma and, 5811
- oral, of small animals, 15382
- of ovary, masculinoblastoma, 11299
- papilloma. (See *Papilloma*)
- pheochromocytoma, adrenal gland, pressor effects, 9516
- of pineal gland, hypogonadism and, 7827
- plant. (See also *Crown gall*; *Gall*; *Intumescence*; *Phytomonas tumefaciens*)
 - as influenced by:
 - apple emanation, 14052
 - colchicine, 6666, 14086
 - enzymes, 8605
 - K salts, 14087
 - resembling crown gall, induced by dye, 10864
- produced, by atmospheric dusts, mice, 16843
- by benzpyrene, 580, 589
- method of action, 574
- mouse carcasses as affecting, 13215
- transplantation in chickens, 14904
- vit. B and, 16519
- by benzpyrene and coal tar, 4188
- by cardiac glucosides and saponins, 2371
- by chemicals, mice, 16831
- by cholesterol derivatives, rats, 13223
- by cholesterol vs. phenanthrenes, 13197
- by dibenzanthracene, 11295
- castration as affecting, 14907
- in central nervous system, 11294
- effect on Fe in lymph nodes, 14911
- in lungs, 14896
- metabolism and, 16847
- transplantation, 590

Tumors (continued)

- produced (continued)
 - by dinitrophenol 2-4, in tarred mice, 610
 - by disturbed electrical oscillatory system, 13209
 - by estrogen, 2113, 4217, 5808
 - review, 14644
 - by heterocyclic N compounds, 13207
 - by hydrocarbons, 4182, 11284, 14900
 - As, and dyes, 7824
 - new, 568
 - polarographic study, 13233
 - polynuclear aromatic, 2355
 - by methylcholanthrene, 4218, 11288
 - and dibenzanthracene, 11292, 14906
 - by mineral oil, 16886
 - by natural fats, mice, 7830
 - by pale tobacco, 4223
 - by subcutaneous tablets of estradiol, 16865
 - by tar, in coffee, 13221
 - in lampblack, mice, 606
 - retarded by elements of digestive tract, 610
 - tumors of rabbits due to virus and, 6163
 - in tobacco, rabbit, 9591
 - by tar and dibenzanthracene, filterability and path., 7842
 - by thorotrast, 16851
 - by trauma, 11276, 13218, 13219
 - by u.v., diet as affecting, 16835
 - by virus and tar, comparison, 6163
 - by wheat germ oil, 4184, 5810
 - 11281, 13198, 13201
- production, diet as affecting, 2361, 14874
- ether peroxides in wheat germ oil as affecting, 4186
- role of estrogens in, mice, 592, 595
- of virus in, frog, 598
- of vit. B₁₂ in, 12845
- of yeast feeding, in, 12846
- substances causing, chem. and properties, 5551
- radiosensitivity, inorganic nuclear content as affecting, 4185
- at various sites, 13235
- reticulosarcoma, classification, 603
- review, 7245
- rhabdomyoma, of heart, cerebral tuberculous sclerosis and, infant, 7840
- rhabdomyosarcoma, of diaphragm, path., 16876
- sarcoid, Boeck's relation to uveoparotid fever, 4203
- in stenosis of bronchial bifurcation, 11293
- tuberculosis and, 2363
- diagnosis, 16897
- ocular importance, relation to uveoparotid fever, 7648
- sarcoma, contorted mitoses, origin, 16863
- Cryptococcus haematocolon* in, 6205
- effect on lymph glands, mice, 599
- induced by 1,2,5,6-dibenzanthracene, hist., mice, 594
- implantation into rabbit brain, findings, 16883
- Jensen's, antigenic specificity, 810
- effect on sexual functions, rat, 4190
- resistance of muscle proteins to proteolysis during development, 9096
- species-specific lipid antigens in, distr. and properties, 2527
- transplanted, cholesterol and lipids in, 4209
- lactoflavin and cytochrome C as affecting, 13232
- 180, mouse, reactivity to bacterial filtrates, 2357
- primary and induced, carcinogens as affecting in mice, rats, 585
- of prostate, 16849
- pyrogenic filterable agent in, rat, 613
- Rous, antibodies for virus in sera of "normal" chicks, 4537
- of soft tissues, hist., 16842
- spindle cell, heptyl aldehyde as affecting, 9541
- of testicular capsule, 7835
- tissue culture, transmissibility after irradiation, 14910
- transmissible, vaccine virus as affecting, 14891
- and virus problem, 16887
- x-rays as affecting, mice, 14910
- seminoma, gonadotrophic action of urine in, 7969

- Tumors (continued)**
 serological specificity in different animals, 6049
 sex hormones and, 5551
 sexual specificity, follicular hormone and, 14886
 of small intestines, types, sex incidence, 14881
 spontaneous, effect of methyl salicylate on growth, mouse, 8958
 spontaneous and induced, in liver and lung, C₃H mice, 16830
 spontaneous lung, susceptibility, transmission as dominant, mouse, 1761
 of testis, interstitial cell hyperplasia, 16879
 therapy with cancerogenic methylcholanthrene, 13211
 with cysteine, in animals, 575
 with ultra-short waves, 7282
 with x-ray, report, 14472, 16323
 of thymus, metastases, rabbit, 16874
 tissue culture, of methylcholanthrene sarcoma, 4213
 of rat mammary carcinoma, 5807
 tissue, freezing as affecting, 11289
 lipid content, significance, 13210
 metabolism, 13200
 nucleotides in, 12681
 proteolytic enzymes, specificity, 3560
 radioactive K in, 16862
 tryptophane in, rats, 4227
 vit. C oxidation in, 2073
 transplants, affinity for injected trypan blue, mice, 4366
 hetero-, mice and rats, 4228
 homologous, 5809
 from regional lymph nodes, rats, 13205
 relation to normal tissue, mice, 13213
 of uterus, atypical growths due to estrogens, guinea pig, 5643, 5644
 blood coagulation and, 14924
 estrogens as affecting, guinea pig, 12970
 venereal-disease relations, 15326
 viruses as possible causes, 35
 Walker tumor no. 256, decontamination from bacteria, rats, 581
 xanthoma, production by cholesterol, rabbits, 14905
- Tuna.** (See also *Thunnus*.)
 dermis, structure, 4345
 Tung-oil tree. (See *Aleurites*.)
- Tunicata** (Prochordata), p.1878¹
 atrium, homology with pronephric duct of vertebrates, 9761
- Turbellaria** (Platyhelminthes), p.1869¹
 adult and immature forms in taxonomy (*Nematoderma*), 1602
 chromosomes, comparative study, 5300
 tissue regeneration, carcinogens as affecting, 16875
- Turbidimetry.** (See *Nephelometry*.)
- Turbinidae** (Mollusca), p.1872¹
- Turdidae** (Aves), p.1882¹
- Turdus** (p.1882¹), banding, 14296
 sleep of, 8841
auratus angustirostris, note on, 8827
merula, nesting notes, 5194
migratorius migratorius, *Plasmodium* from, 3257
pilaris, banding and return records of, 8835
- Turf.** (See *Cutting; Grasses*.)
- Turgor.** (See also *Osmotic pressure*.)
 in latex tubes, *Euphorbia*, 6624
 tension, relation to osmotic pressure, 6582
- Turkey(ies).** (See also *Meleagris*.)
 animal husbandry, 11489
 artificial insemination, 13836
 blackhead disease, blood changes during, 10494
 breastbones, relation to roosting, 15122
 Bronze-Bourbon Red mosaic, 5533
Capillaria columbae in, 14193
Capillaria contorta in, pathology and therapy, 17894
 Clostridium infection in, 11733
 dietary protein level as affecting, 2507
 dressed, avian tubercle bacilli in, 1012
 U. S. standards for grading, 13287
 egg production, in artificially lengthened days, 11514
 factors affecting, 11503
 embryo position, relation to mortality, 784
Leucocytozoon in, southeastern U. S., 12273
 poult, enteritis, *Hexamita* as cause, 6735
Hexamita from partridge transmitted to, 15964
- pox, epidemic, diagnosis and immunization, 957
 production, in California, 11502
 rearing and feeding in confinement, 2502
 sinusitis, therapy, 2702
 swine-erysipelas in, 11751
 vit. D requirement, 16540
- Turnicidae** (Aves), p.1881¹
- Turnip(s).** (See also *Brassica; Rutabaga*.)
 brown heart, B deficiency disease, 8617
 dried tops, as pig feed, 15094
 mosaic (virus), symptoms, hosts and properties, 8616
- Turnix** (p.1881¹), n. spp., 7015
- Turpentine.** -dermatitis, patch test and, 17144
 as vermifuge, calves, 1562
- Turpentina.** (See *Resin, production*.)
- Turritella** (p.1872¹) *kellumi*, n. n. for *T. subtilis*, 5122
terebra spp. *kendagensis* (Pl.), 16010
- Turritellidae** (Mollusca), p.1872¹
- Turritis** (p.1865¹), n. sp., 8444
- Turtle(s).** (See also *Reptilia*; and under genera, e.g., *Caretta*, *Clemmys*, etc.)
 anatomy of two headed, 5963
 brain, pretectal region, structure, 15012
 of Chicago area, 3405
Eimeria in Indian tortoise, 6762
 liver, Hb producing factor in, 9267
 olfactory formations, 9676
 scutes, amino acid comp., 5447
 of U. S., book, 16060
 vision studies in, 2197, 2199
- Tutankhamen** (p.1874¹), tax., 1616
- Twin(s).** (See also *Births, multiple*.)
 ability and personality, heredity and, 9735
 body measurements, 2461, 8013
 in cattle, genetics and, 11473
 cutaneous nerves and veins in arms, branching, 9743
 diabetes mellitus in, man, 1801, 10743
 identical, body measurements, 2461
 brain potentials and lateral dominance in, 458
 essential hypertension, 5353
 identical and fraternal, Abderhalden reaction in, 1787
 electrocardiographs, man, 5355
 linkage of factors for production, man, 10744
 inheritance, of broad and long heads, 9731
 of cerebral patterns, 9733
 simple modes, 1798
 kindreds producing, and sex ratio, man, 8964
 lid folds, types in Europeans, 9722
 pattern of forehead wrinkling, 8009
 prenatal, syphilis in one, 15346
 reaction pattern, to geometric figures in form board, 8008
- Twinning**, in marmosets, 9764
- Twinning**, in plants. (See *Movement; Tropisms*.)
- Twort phenomena.** (See *Bacteriophage*.)
- Tychius longiclavus**, note, 5132
- Tylenchidae** (Nematoda), p.1870¹
- Tylenchus** (p.1870¹). (See *Nematoda*.)
- TYLOCHYTRIUM** (Fungi) (p.1861¹), n. n. for *Phlyctidium*, 15452
- Tylolephus** (p.1870¹) *rhachiaea*, excretory syst. development, 10542
- Tylolema** (p.1876¹) *fragariae*, on strawberry, predators, life hist. and control, 15897
- Tylophora** (p.1867¹), n. spp., 13768, 15483
- Tyloses.** (See also *Wood*.)
- Tympanum.** (See under *Ear*.)
- Typha** (p.1864¹), spp. pollen and seed development, 4766
- Typhaceae** (Monocotyledones), p.1864¹
- Typhlocyba**, in ducks, Michigan, 1591
- Typhlocyba pomaria**, control by pyrethrum, 10400
Entomophthora parasite of, 3169
- Typhlogobius californiensis**, natural history, 14286
- Typhlohepatitis**, in turkeys, 10494
- TYPHLOHEMA** (Nemath.) (p.1870¹) *salomonis*, from *Gecko*, 14216
- Typhloplanidae** (Platyhelminthes), p.1869¹
- Typhoid.** (See also *Eberthella typhosa; Enteric fevers*.)
 agglutination tests, H vs. O antigens for, 11659
Bacterium paratyphosum C causing, in Egypt, 17307
 carriers, case studies, 11717
 detection methods, 13448
- Typhoid (continued)**
 carriers (continued)
 epidemic from food infected by, 6212, 10032
 incidence, 10015
 serodiagnosis by Vi-agglutination, 8101
 control, in army, 15307
 epidemiology, 17371
 etiology and, critique of Pettenkofer theory, 15349
 fowl. (See *Fowl-typhoid*.)
 general review, 15269
 immunization to, ascorbic acid as affecting, 11537
 factors affecting agglutinin production in, 13446
 by intracutaneous re-vaccination, 13482
 methods, 4453
 oral vs. subcutaneous methods, agglutinin titers by, 2526
 recommended procedures, 11560
 survey, 4533
 incidence and therapy, history, 17119
 -like infection, slow-lactose-fermenting organism causing, 17295
 vaccine for, effective substance, 8154
 modern views on problem, 8305
 normal agglutinins for, in population of Victoria, 836
 oyster production and, map, 14406
 paratyphoid bacillus variants from, 962
 sera, *Salmonella* somatic and "X" agglutinins in, 17127
 Vi-antigen in, 4494
 serodiagnosis, agglutination specificity and non-specificity, 799
 by Gruber-Widal reaction, greasy, acid and alkaline tubes as affecting, 17348
 interpretation, 836
 statistics, 13448
 technic, 798
 value, 2556
 by slide agglutination test, 17825
 technic, 807
 by Vi-agglutination, 8101
 Vi-antigen in, 2556
 serotherapy, 17221
 type incidence in cases, 18661
 vaccination, oral, effect on phagocytic and agglutinative activity, 8141
 vaccine, duration of immunity by, 13482
 effect on temp. of skin vs. muscles of legs, 13421
 O and Vi-antigens in, 2518
 paradoxical immunization by, 9829
 pyrogen, properties and comparisons, 13504
 T.A.B.C., sterilization methods, 17190
- Typhoid-colon-dysentery group of bacteria**, photodynamic action of safranine on, 2687
- Typhoid-colon group of bacteria.** (See *Colon-typhoid group of bacteria*.)
- Typhoid-dysentery group of bacteria**, lecithin-broth culture as affecting, 17305
- Typhoid group of bacteria**, variability in vivo, 13709
- Typhoid-paratyphoid-enteritis group of bacteria**, diagnosis by Hohn-Herrmann method, 17341
 differential medium for, 8275
 differentiation of types and serological phases, media for, 8263
- Typhoid-paratyphoid group of bacteria**, classification, 8358
 immunological relations of polysaccharides of mucoid forms, 9874
- Typhus.** (See also *Proteus vulgaris; Rickettsia prowazeki; Pustular fever*; etc.)
 endemic, animals susceptible to, 2632
 incidence, in Queensland, 994
Rickettsia, tissue culture, 4582
 vectors in New Guinea, 984
 epidemic, *Rickettsia*, tissue culture, 4582
 exanthematic, forms compared to Rocky Mountain spotted fever, 13583
 immunization by tick-prepared vaccine, 13583
 insect transmission and reservoirs, 13583
 forms in So. Africa and comparisons, 8203
 immunization to, by Zinsser-Castaneda vaccine, 11565
 Mexican, virus, strains compared, 15244

SUBJECT INDEX

Typhus-Urea

Typhus (continued)

- murine, *Proteus* from, culture, . . . 8190
- Rickettsia* from, culture, inoculation and immunity tests, . . . 8190
- distr. in chick-embryo culture, . . . 13466
- isolation from house rats in Peiping, . . . 10030
- tissue culture in placental medium, . . . 13576
- virus, isolation from patient, . . . 10024
- in rats and fleas from typhus houses, . . . 10023
- orchitic and non-orchitic Mexican vs. murine and European strains, immunol. comparisons, . . . 11565
- premunition, . . . 1003
- Rickettsias*, agar-slant tissue culture, . . . 4603
- isolation on Zinsser agar-tissue media, . . . 8215
- spp. compared, . . . 13563
- serol. comparison of sera with non-dialyzates of *Proteus vulgaris*, . . . 2547
- transmission by dog ticks, . . . 8291
- vaccines, agar-slant tissue culture prep., . . . 4603
- virus, heterogeneity, . . . 4602
- infection, dosage and, . . . 4602
- tissue culture of São Paulo strain, . . . 9951
- virulence and factors affecting, . . . 4602
- Tyramine, action, duration, dose and, . . . 11211
- detn., . . . 216
- prognostic value in liver disease, . . . 352
- effect on:
 - blood pressure, . . . 9544
 - cocaine and, . . . 11247
 - blood vessels, rabbits, . . . 11172
 - carotid sinus reflexes, . . . 2296
 - circulation, . . . 4142
 - heart-lung prep., . . . 2292
 - iris sphincter, . . . 13155
 - thiobarbiturate action on heart, . . . 525
- sensitivity to, in renal hypertension, . . . 503
- Tyrannidae (Aves), p.1881⁴
- Tyroglyphidae (Arachnida), p.1874⁴
- Tyroglyphus* (p.1874⁴) *farinace*, L.H., effect of temp. on and control, . . . 10420
- Tyromyces* (p.1862³), new species, . . . 6353
- Tyrosine, in blood and lymph after intravenous admin., . . . 12643
- detn., . . . 216
- diiodo-, (See *Iodogorgone*.)
- formation in peptic digestion of casein, . . . 5452
- index, in malaria diagnosis, . . . 6753
- metabolism, isotopic N in, . . . 7425
- mono- and di-iodo, prep. from iodo-protein, . . . 12807
- in potatoes, storage as affecting, . . . 12115
- separation from mixtures, . . . 5490
- transformation to pigments by soil microorganisms, . . . 17437
- Tyto (p.1881³) *a. alba*, banding, . . . 14296
- Tytonidae (Aves), p.1881³

U

Udder. (See Mammary gland.)

- Udeus* (p.1876³), n. spp., . . . 3769
- Ulcer(s), of cornea, Mooren's, . . . 9473
- therapeutic agents tested by, . . . 15261
- cutaneous, in Hodgkin's disease, . . . 600
- diabetic, maggot- vs. chemo-therapy, . . . 17256
- disease, in trout, . . . 15391
- duodenal, gastric juice in, cigarette smoking as affecting, . . . 12909
- pituitary adenoma and, . . . 11285
- relation of bile and pancreatic juice to, dog, . . . 7501
- Schiff-Auerbach phenomenon and, . . . 7870
- esophageal, gastric and duodenal, acute postoperative, . . . 14583
- gastric, benign and syphilitic cases, . . . 4613
- carcinomatous perforated, streptococic sepsis in, . . . 17289
- etiology and production by pitressin, . . . 2106
- production by aliphatic amines, 12894
- protection against by urine extracts, . . . 11030
- thyroxine causing, guinea pigs, . . . 398
- treatment, . . . 5589, 12874
- leg, mecholyl iontophoresis in therapy, . . . 11200
- peptic, alkalosis during treatment, . . . 14502

- allergy and, . . . 14571
- bleeding, effect on blood, . . . 1955
- on reticulocyte count, . . . 647
- symptoms and erythropoiesis after, . . . 16419
- of esophagus associated with esophageal hiatus hernia, . . . 17056
- histopath. of nervous system in, . . . 16951
- similarity to amebic gastric lesion, . . . 10495
- vit. C in blood in, . . . 12857
- phagedenic, streptococci and staphylococci associated with, . . . 6177
- tropical, protein deficiencies, avitaminosis and, . . . 5847
- varicose, maggot- vs. chemo-therapy, . . . 17256
- post-phlebitic, . . . 4084
- Uliron, in gonorrhea, . . . 2327
- in tropical diseases, . . . 17243
- Ullucus tuberosus*, photoperiodism in, 12080
- Ulmaceae (Dicotyledones), p.1865²
- Ulmus* (p.1865²). (See also *Elm*.)
- tax., . . . 1138, 15486
- chromosome no. of spp., . . . 15853
- susceptibility of various species, to *Ceratostomella*, . . . 4998
- americana*, atavistic leaf forms, . . . 11853
- owyheensis* (N), . . . 10099
- Ulothrix* (p.1860³) *zonata*, host of *Rhizidium laterale*, . . . 2807
- Ulotrichaceae (Algae), p.1860³
- Ultrabranched body, of mammals, interpretation, . . . 15064
- Ultracentrifugation. (See under *Centrifugation*.)
- Ultracentrifuge. (See under *Centrifuge*.)
- Ultrafiltration. (See *Filterable forms*; *Filtration*; *Membranes*; *Osmosis*; *Permeability*; *Viruses*.)
- Ultramicroscope. (See under *Microscopy*.)
- Ultrasort waves. (See *Electric field*, *high frequency oscillating*.)
- Ultrasonic waves. (See *Sound*, *high frequency waves*.)
- Ultraviolet. (See also *Ergosterol*; *Irradiation*; *Light*; *Radiation*; *Rickets*; *Vitamins*.)
- absorption of CO-saturated, oxidized and reduced blood, . . . 7861
- of cytochrome C and Na₂S₂O₈, . . . 12711
- of thyroglobulin, . . . 10867
- absorption spectra. (See also *Spectrum*.)
- of viruses of potato mottle and tobacco ringspot, . . . 17783
- air sanitation by, . . . 11701
- cinnamic acid activated by, . . . 6579
- dairy equipment and products sterilized by, . . . 15402
- dosimeter for measuring radiation, . . . 16243
- effect on:
 - acute disseminated lupus erythematosus, . . . 9613
 - allergic cutaneous reactions, . . . 795
 - antibody titers with and without quinine injection, . . . 18410
 - bacteria, . . . 4717
 - blood bactericidal power, . . . 926
 - blood P, infants, . . . 2348
 - blood and tissue proteins, . . . 5457
 - body wt., rats, . . . 12684
 - Ca and P balance in osteomalacia, . . . 10990
 - cell growth, . . . 3570
 - cholesterol, distillation products, . . . 18224
 - of skin, blood and tumor tissue, rats, . . . 11290
 - cleavage of marine eggs, . . . 766
 - crossing-over, *Drosophila*, . . . 5336
 - dehydrogenase activity, . . . 3562
 - development of bean rust, . . . 5004
 - egg albumin, . . . 14462
 - estrone, . . . 7278
 - excretion of sex hormones in ♂, . . . 16318
 - fructose, . . . 1900
 - gallic and cholic acids, . . . 12690
 - grasshopper eggs, . . . 1904
 - growth and fruiting of mold, . . . 15442
 - melanophores in fish scales, . . . 14663
 - mutation rate, *Chaetomium globosum*, . . . 16179
 - Nereis* egg, Mg ion and, . . . 7257
 - non-carcinogenic hydrocarbons, 11302
 - Paramedium*, . . . 9102
 - permeability of lens capsule to Ca, . . . 9076
 - plants, . . . 15754
 - pneumococcus autolysins, . . . 13495
 - proteins, temp. coefficient, . . . 5467

Ultraviolet (continued)

- effect on (continued)
 - rabbit ear, . . . 5786
 - rat leprosy bacilli, . . . 17880
 - respiration, plants, . . . 14011
 - sedimentation and light absorption of serum albumin, . . . 5510
 - seed germination and growth of plants, . . . 14012
 - septicemia, . . . 9101
 - sexuality, *Chlamydomonas* gametes, . . . 10305
 - skin, in production of carcinoma, . . . 4179
 - spores of *Trichophyton*, . . . 16168
 - sulfanilamide, . . . 538, 9108
 - tobacco mosaic virus, inheritance structure of cell and, . . . 5472
 - Urechts* eggs and sperm, . . . 12686
 - viability, *Aspergillus* spores, . . . 15755
 - vit. A, . . . 7470
 - wing development, *Drosophila*, . . . 5336
 - 14368
 - xanthoma formation, rabbits, . . . 14905
- irradiation, of amoeba, fat release after, . . . 1902
- of body, effect on opsonin production, . . . 14505
- of cholesterol, photoelectrical effects and, . . . 9594
- group protection of planarians and, . . . 7183
- of milk, properties and methods, . . . 13885
- relation to activated flavor, . . . 3077
- skin cholesterol increases after colored filters and, . . . 3571
- radiation of Arctic Circle, erythema effectiveness, . . . 10762
- and human biology, . . . 3980
- sensitizing bacterial spores to heat and light by, . . . 2754
- skin pigmentation effect, . . . 3568
- in tumor formation, diet as affecting, . . . 14874, 16835
- use in diseases of eye, . . . 13066
- in microscopy, . . . 16120
- visibility by animals, . . . 3485
- vision in, fish, . . . 13057
- wound hormones produced by, yeast, . . . 1359
- Ultravivax, saponin-like action, . . . 16772
- Uva* (p.1860³) *atroviridis*, . . . 2793
- pertusa*, life history, . . . 8381
- Ulvaceae (Algae), p.1860³
- Umbellales (Dicotyledones), p.1866³
- Umbelliferae (Dicotyledones), p.1866³
- key to Washington spp., . . . 1158
- Umbelliflorae (Dicotyledones), p.1866³
- Umbilical cord, formation, . . . 17046
- Umbilicaria* (p.1862³), new species, . . . 6364
- 10116
- Uncaria gambir*, insect enemies, . . . 8977
- Undulant fever. (See also *Brucella abortus*; *Br. melitensis*.)
- blood studies in, . . . 10892
- chemotherapy, . . . 6136, 15137
- incubation, . . . 15205, 17261
- chronic, incidence, U. S. A., . . . 6208
- classic vs. clinical forms in Greece, . . . 6213
- epidemiology in Iran, . . . 10011
- pathogenesis and, . . . 11699
- prophylaxis and, . . . 15339
- hist. of cutaneous reaction to *Brucella* antigen, . . . 9846
- ocular manifestations, . . . 4614
- serodiagnosis, by blood clot method, . . . 2648
- by rapid vs. slow methods, . . . 13502
- serotherapy, with polyvalent serum, . . . 17137
- skin test for, . . . 15286
- statistics in school children, . . . 11649
- Unicaecum* (p.1870⁴), tax., . . . 6788
- Unio tumidus* eggs, x-rays as affecting, . . . 16326
- Unio*, . . . 3313
- Unio crassipes*, in fresh water sponges, . . . 3313
- Unionidae (Mollusca), p.1872⁴
- Universe (statistical). (See *Population* (statistical).)
- Unonopsis* (p.1865³), n. sp., . . . 2865
- Uraanthus* (p.1876³), tax., . . . 10595
- Uranium, in minerals, radioactivity, . . . 9596
- Urbanization, mortality from respiratory diseases and, . . . 6209
- Urea. (See also *Nitrogen*, *metabolism*; *Protein*, *metabolism*; *urease* under *Enzymes*.)
- arginine as parent substance, birds, . . . 3997
- in blood. (See under *Blood*.)
- in body fluids after inj., . . . 7377
- in cerebrospinal fluid, cattle, . . . 16433

Urea (continued)

- clearance, after anesthesia, dog, 409
 creatinine clearance and, in nephro-
 sis, 2137
 as influenced by:
 fever in rheumatism, 407
 renal blood supply, 7562
 vit. A, dog, 7566
 in malignant hypertension, 9527
 test in shock, 1955
 compounds, urease as affecting, 5458
 creatinine production by bacteria from,
 6305
 derivatives, anesthetic action, diet as
 affecting, mice and rats, 4121
 bacterial decomp., 18713
 seasonal variations of response, mice,
 4108, 4109
 detn., 7300, 16347
 diacyl-, hypnotic action, 13178
 diuresis by, ergot alkaloids as affecting,
 5794
 effect on:
 acetylcholine action on heart, frog,
 9548
 aggregations of tadpoles in light,
 7615
 cardio-depressor and vasomotor
 centers, 14842, 14842A
 diffusion and viscosity of serum al-
 bumin, 7369
 frog heart, 5762
 hemoglobin, 10899
 membrane permeability, 5429
 novocaine action, frog, 14811
 strophanthin action on heart, 7768
 yellow fever virus, 8198
 excretion, in *Ascaris*, 13173
 psyllium-fed rats, 16341
 in extracts of blood lipids, 8639
 fibrinogen destroyed by, 5435
 isotonic conc., detn., 13172, 13173
 malonyl-, compounds, effects in com-
 bination with other ureas and
 alcohol, 2496
 in milk, detn., 12746
 partition between blood and vitreous
 body, *Selachii*, 8647
 passage into tissues and fluids after
 intraven. inj., 1863
 permeability of plant cells to, 11214
 n-propyl-o-tolyl-, anesthesia, weather
 and, 4108
 toxicity, mice, 5999, 8088, 13353
 as protein substitute, for cattle and
 sheep, 12805
 secretion, uric acid synthesis and,
 amphibia, 18016
 synthesis in body, rôle of citrullin in,
 355, 8762, 7420
 in liver tissue, 17256
 in therapy of wounds, etc., 18178
 thio-, studies,
 in urine, (See under *Urine*.)
 Urea bacteria, (See *Bacteria*, *urea*.)
 Ureastibamine, in kala azar therapy, 2666
 Urechia (p.1871), cleavage, u.v. light as
 affecting, 768
 eggs, life span, acid as affecting, 12659
 caupo, bilateral determination in eggs,
 centrifugal force as affecting, 4398
 eggs, partition of nitrogen in develop-
 ing, 17065
 eggs and sperm, ultraviolet as affect-
 ing, 12686
 Uredinales (p.1862?), (See also *Rusts*.)
 Uredo (p.1862?), tax., 6345, 15455
 Uremia, anemia-producing properties of
 blood serum, 11821
 blood in, yeast fermentation inhibition
 by, 5516
 blood phosphocreatine in, 1950
 convulsive, in renal hypertension, 503
 effect on brain metabolism, 408
 regurgitant murmur in, 4094
 xanthoproteic reaction in, 17335
 Ureter(s), (See also *Kidney*.)
 ligation, glycemia production by, 14515
 musculature, structure, 7976
 right, absence in fetal pig, 11456
 Urethane, anesthesia, circulatory drugs as
 affecting, 4169
 derivatives, as local anesthetics, 11257
 Urethra, calculus in, 7567
 Urethritis, gonococci, acetylsulfanilamide
 therapy, 9938
 Urtica (p.1865) *indica*, gametophytes of,
 11912
 Uric acid, (See also *Allantoin*.)
 in blood, (See under *Blood*.)
 clearance after purine adm., threshold
 level and, 13008

- effect on O₂ uptake of liver and kidney
 tissue, 13147
 excretion, carbohydrate and fat as af-
 fecting, man, 9187
 Liesegang ring formation from, 12648
 metabolism, Li, I and iodosal as af-
 fecting, 512
 in saliva, significance, 16562
 synthesis in amphibia, 12805
 in urine, (See under *Urine*.)
 Uridylic acid, hydrolysis by digestive se-
 cretions and tissue extracts, 12670
 Urinary bladder, cystography, of tumors,
 importance, 4202
 infections, chemotherapy, 17248
 as influenced by:
 hydrocupreine and hydrocupreidine,
 5747
 progynon-B, cat, 16593
 opium alkaloids, 528
 responses after ant. hypothalamus stim.,
 5668
 retrograde urine resorption in, 2153
 Urinary tract, (See also *Kidney*; *Ureters*;
 Urethra; *Urinary bladder*.)
 brucellosis-associated infections, and
 therapy, 15276
 infections, Ca mandelate therapy, 4558
 chemotherapy, 13534, 17248
 diagnosis and, 11577
 of *Escherichia coli*, 11587
 in newborn, 16650
 sulfanilamide therapy, 4558
 sulfapyridine therapy, 9931
 musculature, structure, 7976
 upper, distension, effect on gastric
 hunger motility, 12643
 Urine, (See also *Diabetes*; *Diuresis*; *Kid-
 ney*; etc.)
 in Abderhalden test for carcinoma, 16882
 albumin, reaction with sulfosalicylic acid
 in, simulating Bence-Jones pro-
 teinuria, 5661
 alcohol in, detn., 1922
 after ingestion and exercise, 276
 amino acids, detn., 10871
 ammonia, origin, 16647
 review, 7245
 test for, 12733
 analysis, book, 11660
 microscopical, prep. of sediments for,
 11670
 As in after adm. of organic arsenicals,
 16814
 autogenous, local pulmonary anaphy-
 laxis induced by, 13435
 bases in, serum bases and, 13012
 bile in, after small intestine occlusion,
 dog, 12876
 blood coagulation favoring substance
 for hemophiliacs, presence in
 diseases, 10905
 blue fluorescence in u.v. light, 3948
 Ca output, assay of parathormone,
 14647
 calculi, (See under *Calculus*.)
 castrate, estrogenic activity, adrenal as
 source, man, 12987
 ♀, effect on ovary of guinea pigs,
 5624, 5625
 chloride, renal vasoconstriction as af-
 fecting, 18023
 after test meal, gastric acidity and,
 12887
 composition, of Bengalee subjects, 410
 in botulism localities, sheep, 15389
 in epidemic dropsy, 267
 as influenced by:
 ant. pituitary, 11066
 ergot alkaloids, 2339
 hematoporphyrin, 3657
 parathormone, 9339
 in renal amyloidosis, 7859
 concentration, exptl., dog, 5656
 in malignant hypertension, 9527
 creatin, ant. pituitary extracts as af-
 fecting, dog, 14625
 after hunger or phlorhizin, rabbits,
 7428
 liver and, 845
 vegetative nerve function and, 13021
 creatine and creatinine in, during preg-
 nancy, man, 3973
 creatinine, basal metabolism and, 2019
 Ia, as affecting, hypothyroid children,
 14972
 cystine, albumin metabolism in, 3676
 ascorbic acid and methionine as af-
 fecting, man, 16474
 cystine and cysteine, kidney overstrain
 and, 16655

Urine (continued)

- desoxycholic acid, in avitaminosis B,
 16923
 diabetic, effect on carbohydrate me-
 tabolism, 11064, 11065
 hyperglycemic principle, pancreas and
 hypophysis and, rabbit, 9637
 diastase, in acute pancreatic necrosis,
 9408
 as index of unilateral renal function,
 3940
 electrolytes, in adrenal insufficiency,
 5854
 extracts, antidiuretic substance in,
 16686
 blue fluorescent, action, 5658
 cortin-like action, 12643
 gonadotrophic, cysteine as affecting,
 14622
 detn. on abnormal non-pregnant
 women, 5617
 menopausal and pregnancy, effect on
 ovary, monkey, 11052
 post. pituitary principles isolated,
 1625
 pressor and antidiuretic actions, 3939
 protection against gastric ulcer by
 and effect on motility, 11080
 F, mottled enamel and, 9669
 formation, kidney O₂ consumption and,
 13020
 processes, 5660
 gastric secretory depressant in, 12643
 Hb in, paroxysmal, etiology, 686
 hormones in, (See also *Urine*, of
 pregnancy.)
 androgens in, 3860, 11058
 excretion daily, in children, 9404
 after inj., 9401
 after testosterone, 14968, 16602
 thyroid feeding as affecting,
 rabbit, 12978
 after treatment, man, 3814
 isolated, normal women, 16595
 transformation products of testos-
 terone isolated from, 11049
 androgen and estrogen, testosterone
 as affecting, in eunuchs, 14964
 androsterone, detn., 3875
 anti-diuretic, in adrenalectomized
 cats, 12974
 in eclamptic and pre-eclamptic pa-
 tients, 9409
 factors affecting, 16814
 diabetogenous, detn., 12721
 estrogen, excretion, testosterone inj.
 as affecting, monkey, 16603
 extraction for bioassay, 9113, 9122
 mare, 5675
 estrone, after infection, 3944
 gamone, effect on adrenal cortex,
 pigeon, 12977
 gonadotrophic, in chorionepithelioma,
 2368, 9640
 in differentiation of teratoma testis
 and chorionepithelioma, tes-
 tis, 2366
 effect on blood P, fowl, 3855
 extraction for assay, 9122
 in normal, castrate, menopausal and
 estrin-treated ♀♀, 5628
 male sex, daily excretion, 13010
 pregnandioli, detn. in, 2151
 during menstrual cycles and preg-
 nancy, human, 5648
 in menstrual disorder, 9645
 after progesterone treatment, man,
 12936, 16609
 significance, 5655
 prolan, spectroscopic exam., 9285
 prolan and progestin in, horse, 11071
 sex, origin from adrenals, 9286
 thyrotrophic, in various diseases,
 4271
 hippuric acid in, rabbit, 13013
 pH, detn., 13534
 as influenced by Ca or Na gluconate,
 4119
 by gluconic acid, 4120
 icteric, green color reaction with para-
 dimethylaminobenzaldehyde, 16328
 indican reaction, indol derivatives as
 affecting, 13141
 inulin, detn., 1936, 5480
 iodide, acetone fractionation, factors
 affecting, 16336
 in nodular goiter, 4258
 ketones, as influenced by:
 adrenalectomy, rat, 12972
 choline, 7560
 glucose and feeding, rat, 16494
 silage in cow rations, 4412

SUBJECT INDEX

Urine-Uterus

Urine (continued)

- from leucemic patients, effect on guinea pigs,13260
- levulose, liver extract as affecting, child,9578
- menopause, extract, effect on sex organs in immature ♀ cats,16633
- menstrual and pregnancy, effect on uterine motility, rabbit,9653
- mercury, detn.,7298
- methemoglobin-forming power,7572
- neurotoxic substances in, causing catatonias,5659
- neurotoxins, separation,5489
- nicotine, detn.,13011
- isolation,3946
- nicotinic acid, color reaction for,3953
- detn.,16926
- nitrogen, ant. pituitary extracts as affecting, dog,14625
- output, control by ant. pituitary, 3951 as influenced by:
 - acetylcholine,7557
 - anoxia, in adrenalectomized dogs with denervated kidneys,12643
 - carotid sinus pressure,16649
 - ergot alkaloids,2339
 - liver disease,13015
 - posture,9511
 - sucrose and sorbitol,2380
 - Na excretion and,16654
 - oxalic acid in,12826
 - phenothiazine derivatives bactericidal to,2384
 - photodynamic activity in mice treated with blastogenic hydrocarbons,16652
 - phosphate excretion in dogfish,14672
 - pigments. (See also under *Pigments*)
 - bile,12876
 - bilirubin, physico-chem. state,3650
 - porphyrin, in cattle,6246
 - as pellagra symptom,11735
 - detn.,2152, 3595
 - isolation and spectrographic study,8284
 - urobilinogen, detn.,12728
- polypeptides, after urological operations, prognostic value,10936
- polysaccharides in,18018
- of pregnancy, Abderhalden's test modified,3978
- antigonadotrophic action of serum of injected rabbits,7551
- assay, in post-partum rabbit,14623
- on rat and rabbit,5626
- with unitage,12937
- cattle, effect on mammary glands of castrate rabbits,16617
- as cortico-adrenal substitute,18049
- effect on:
 - estrus and mating, dog,9332
 - hypophysectomized mice,12948
 - testes of dwarf mice,4283
 - estrogens in, during labor,2171
 - types,9641
 - estrogenic and androgenic substances in,11057
- extracts, effect on:
 - Brown-Pearce epithelioma, rabbits,596
 - gastric secretion,12643
 - lactation, rat,9315
 - pregnant rabbit,11113
 - gonadotrophic, ageing as affecting,12643
 - masculinization of ♀ rats by, 12934
 - serum response to, man,9368
 - gonadotrophic assay method with vit. B-deficient rat,16610
 - gonadotrophic substances in, effect on genitalia of *Didelphys*,7969
 - purification,11056
 - isolation of estrogen from mare, 2126
 - lesions of fetuses after treatment of mother with,2154
 - masculinizing effect on pullets, 11416
 - nomenclature of gonad-stimulating hormone,16586
 - pregnancy test, toad,3964
 - prolan, comparative potency of commercial preps.,14626
 - effect on:
 - gastric secretion,14613
 - mammary gland lipids,14688
 - ovaries, carcinogenesis and, mice,4269
 - testis and accessory sex organs, rat,2441
 - thymus, rat,3796
 - uterus and ovary,7837
 - homogeneity of pure fractions,16608

Urine (continued)

- of pregnancy (continued)
 - reducing factor in, pregnancy test and,14677
 - synergism and antagonism with ex gonadotrophin rabbit, 12940
 - toxicity, mineral salts and,9343
 - presence of rat polyarthritis agent,16893
 - pressor action, nicotine as source, 8946
 - proteases of tissue in, in starvation, dog,5442
 - protein, crystalline Bence-Jones, in myeloma,14901
 - mode of elimination,2136
 - after momentary vascular constriction,2139
 - passage, from blood into,14495
 - pyuria in newborn,16650
 - reducing substances, in fasting specimens,11089
 - reduction value, vit. C as affecting, 2066
 - resorption, retrograde, in bladder, 2153
 - reticulocytogenic principle, effect in pernicious anemia,12643
 - salicylic and benzoic acid elimination in, spectrographic measurements,14670
 - sodium, detn.,2140
 - sodium and K excretion in adrenalectomized rats with and without salt,12643
 - sugar, absent in hyperglycemia, metabolism and,9633
 - as influenced by:
 - adrenal cortical tumors,587
 - ant. pituitary,3847
 - tonsil extracts,12768
 - during and after insulin shock, 14960
 - non-diabetic, studies,7899
 - after pancreatectomy, insulin as affecting,16813
 - sulfanilamide in, detn.,9941
 - sulfapyridine products in,8184
 - sulfonamide compounds in, estimation,4576
 - sulphate, test, in benzene poisoning,7922
 - surface tension, during menstrual cycle,9398
 - and osmotic pressure,3950
 - thionol in, after phenothiazine,2294
 - thyrotrophic activity,14966
 - trichloroacetic acid as excretion product of trichloroethylene,7559
 - trimethylamine oxide diffusion from udder into,13864
 - tubercle bacillus recovery from, methods compared,9937
 - typhoid bacilli in, isolation media, 11658
 - urea in, psyllium-fed rats,13178
 - uric acid in Bright's disease,3941
 - uroterine, in health and disease, 13019
 - vit. A in,7560
 - assay,5554
 - vit. B₁ in,16520
 - detn.,8587, 12732
 - excess per os as affecting,12849
 - after intraspinal inj.,12850
 - vit. C in, blood content and,329
 - detn.,221, 1918, 7312
 - arsenobenzol as affecting,7570
 - excretion test, children,2343
 - as influenced by:
 - exercise and cold,13024
 - fever,3732
 - renal function,2150
 - during lactation, man,7580
 - volatile reducing substances, in diabetes and nephritis,9631
 - volume, subcut. admin. of water and salts as affecting,16655
- Urinogenital system. (See also *Genitalia*; *Urinary tract*; etc.)
 - bacterial infections, bacteriol. and clinical study,15263
 - cancer, incidence,13214
 - disease, blood N in diagnosis,12310
 - in cats and dogs,15378
 - fistulous knotty elephantiasis, gonococic (?) etiology in African form,11638
 - infections of upper ♀, sulfanilamide therapy,13539
 - of vertebrates, origin,9761
- Urobilinogen. (See under *Pigments*.)
- Urocyon* (p.1883), n. subsp., 7042, 10661
- chneiro, liver cells, intranuclear crystals in,4858
- cinereocaryotenus*, food habits in winter,10822
- tree-climbing by,5240, 14312
- Urocystis cepulae*, on onion, control by early planting,3169

- Urodeles* (Amph.), p.1880¹. (See also *Salamander*; and under genera, e.g., *Ambystoma*.)
 - helminths, Louisiana,6716
 - Urohaustorius*, critical notes,3807
 - Urolepis mobilis*, regeneration and reorganization after injury,3995
- Urology, operations, prognostic value of blood and urinary polypeptides,10936
- Uromyces* (p.1862²), tax.,6348
 - nuclei, structure and behavior, 17494
 - from Venezuela,6345
 - appendiculatus, See *U. phaseoli*,5004
 - hobsoni, on *Jasminum grandiflorum*, life history and pathology,17760
 - phaseoli*, on bean, environmental factors as affecting,5004
 - pathogenicity as affected by light,17322
 - physiologic specialization,17312
 - new physiologic form, in Hawaii,15889
 - typica*, physiologic races,2169
- Uronic acid, in apples, origin,6517
- Urospora* (p.1860²) media,2798
- Urotropin. (See *Methenamine*.)
- Ursidae (Mammalia), p.1883²
- Ursus* (p.1883²). (See also *Bear*.)
 - americanus*, color phases in Pacific northwest,5218
 - arctos prunosus*, in Thibet,5223
 - Urtica dioica*, *Helicobastidium* on,13735
 - Urticaceae (Dicotyledones), p.1865²
 - Urticales (Dicotyledones), p.1865²
 - Urticaria, bacterially-induced,6055
 - heterogenetic antibodies in,346
 - serum-sickness type, cases,6111
 - Urubitinga* (p.1881³), food habits,9064
 - Urus*, from French cave,5211
 - Usnea* (p.1862²), new species,6364
 - ecology,3504
 - barbata, parasitic capacity,17847
- Ustilaginaceae (Fungi), p.1862²
- Ustilaginales (Fungi), p.1862²
- Ustilago* (p.1862²), tax.,2814, 8407
 - antigenic factor, nature,15144
 - nutrition, aneurin as affecting, 6572
 - pharmacology,4122
 - spore germination in,2814
 - avenae*, on oats, environmental factors,3169
 - genetics of resistance to,15845
 - hordei*, on barley, environmental factors,3169
 - forage grasses as hosts,14078
 - maydis*, on corn, non-toxic to animals,12165
 - nigra*, forage grasses as hosts,14078
 - nuda*, inoculation technic,15807
 - tritici*, inoculation technic,15807
 - susceptibility of normal wheat hybrids to,16182
 - on wheat, crowding of seedlings as affecting,15875
 - zeae*, evolution of new races by mutation and hybridization,12151
 - hormones from corn as affecting, 6568
 - Ustiluna vulgaris*, wood rats due to,3169
 - Ustensils, dairy, u.-v. irradiation,15402
 - Uterus, ablation, effect on corpus luteum gravidum and vagina, guinea pig,14682
 - on sex behavior and ovary,9412
- acetylcholine in, during reproductive cycle, rabbit,14685
- in ovariectomized rats, estrin as affecting,9394
- activity, effect on blood O₂ in fetus and mother, cat,429
- adenocarcinoma, transplantation, rabbit,5809
- assay object for estrogens, rat,5684
- bleeding, as influenced by:
 - androgens, man,3824
 - pregneninonol,7902
 - sex steroids,5855
 - testosterone,14970, 14971
 - after single injection of estrogens, monkey,2120
- Brucella abortus* localization in bovine,15362
- cervix, actinomycosis,8223
- behavior of cells under neoplastic conditions,577
- carcinoma, diagnosis, latent period, therapy,2369
- metastases with Charcot-Adams-Stokes syndrome and oncologic crises,4211
- new classification,3534
- epithelium, basal cells in,15027

Uterus (continued)

cervix (continued)
 estrus and adrenalin as affecting, rat, 16661
 ganglioneuroma, with chronic endometritis, 578
 gonorrhea, chemotherapy, 13589
 cytology in bats, 9426
 detn. of hysterotropic and tumorigenous dosage of estrogens, guinea pig, 12970
 distention, effect on blood pressure, 13104
 during labor, monkey, 12643
 electrical stim. in diestrus, pseudopregnancy due to, rat, 415
 endometrial cycle, human, 7587
 endometrium, estrogen as affecting, 4276
 lactoflavine as affecting, 9309
 menstrual changes, 9647
 studies during pregnancy, man, 7579
 estrus reaction, hist. study, rat, 11072
 excitability, hormones as affecting, rat, 9326
 fibroleiomyoma, metastases, 7856
 horn, electrical excitability and chronaxie, guinea pig, 14751
 hypoplasia, estilbin MCO as affecting, 16928
 as influenced by:
 adrenal hormones, rabbit, 9303
 androgens, mouse, 3817
 ant. pituitary extract, man, 386
 castration and hypophysectomy, dog, 14674
 desoxycorticosterone, 12643, 12997
 dioxane derivatives, 5742
 ergometrine, cat, 2321, 16768
 estrogens, 592, 3829, 5643, 9279
 9290, 11405, 14892, 16609
 glycine, 5773
 hexoestrol, rabbit, 16596
 implants of fetal thymus and liver, 9429
 menstrual and labor urine, rabbit, 9653
 post. pituitary extracts, Mg as affecting, 9301
 pregnenolone, 9320, 9366
 progesterone, local inj., 9300, 14638
 man, 16609
 progesterone and epinephrine, 13178
 quinine, 14855
 sympatholytic drugs, 5742
 tar and prolan, carcinogenesis and mice, 7837
 testosterone, 3884, 5630
 9346, 12979, 16605
 theelin, guinea pig, 3884
 trypsin, 5783
 ustilago, 4122
 vit. E deficiency, rat, 5846
 innervation, 11373
 leiomyoma, relation to breast cancer, rats, 16834
 lesions associated with fibromyoma, 16864
 leucocytic migration in, rat, 9366
 mode of transport of sperm, rat, 16661
 motility, control in puerperal rabbit, 12643
 cycle in guinea pig, 7586
 muscle fibers during pregnancy and postpartum, rabbit, 8969
 precancerous changes due to sex hormones, rat, 11061, 11062
 rôle in control of ovarian function during pregnancy hamster, 11106
 of thyroid and ovarian function, rat, 11102
 secretion, comp. domestic fowl, 412
 sensitivity to pituitrin, testosterone as affecting, rabbit, 9340
 tissue, repair, hormonal factor in, rat, 9696
 respiration, rabbit and immature rat, 12643
 transplantation in rabbit, 9493
 tubal contractions, castration and sex hormones as affecting, rabbit, 16638
 tumor, as cause of intracardiac tumor, 612
 chorionepithelioma, hormonal relationships, 2368
 effect on blood coagulation, 14924
 myoma, effect on sterility, 2360
 gonadotrophic chorionhormone as affecting, 4294
 production with estradiol, 16865
 statistical analysis, Belgrade, 19206
 uterotubal junction, patency, rabbit, 9418

in vitro stim. with estrogen, mouse, 3822
 wt. and water content, normal adult rat, 9411
UTEROCINUS (Echin.) (p.1871) (Cb), 10555
Utricularia (p.1867), at Pielisjärvi, 2881A
coerulea, floral abnormality, 15522
 pollen and seed formation, 2907
Uvaria (p.1865), n. spp., 15483
Uvea. (See under *Eye*)
 Uveoparotid fever, relation to benign lymphogranuloma, 4197
 to Boeck's sarcoid, 4203
 to tuberculosis and lymphogranuloma, 2363
 Uveoparotitis, sarcoid and, characteristics, 7648

V

Vaccaria pyramidalis, seed germination, hindered by HCN, 3080
 Vaccination. (See also *Immunization*; under diseases, e.g., *Anthrax*, *Varicella*, etc.; under pathogenic organisms, e.g., *Brucella abortus*, etc.)
 of maize and clover, negative exps., 17809
 of wheat, with *Tilletia* spp., 17810
 Vaccine(s). (See also *Antivirus*, *Besredka's*; *Immunization*; and under specific diseases and pathogenic organisms.)
 alkaline lysed, for gastro-intestinal infections, 2561
 bacterial, constitutional reactions and prevention, 11518
 bottle for, 6027
 chemotherapy synergy, 8185
 "cold," statistics, 17149
 contaminants in, detection as influenced by agar conc., 8259
 neuro. elementary corpuscles, relation to cutaneous lesion, 13570
 vs. vaccinogenic dose, 13568, 13569
 pertussis, washing as affecting, 6106
 sterilization of thermolabile, in presence of bactericides, 8283
 streptococci, liability, 13456
 therapy, chemotherapy plus, 17136
 virus. (See under *Varicella*)
 Vaccinia. (See also *Varicella*)
 azoprotein enhancing effect on lesions due to, 11521
 elementary bodies, complexity of suspensions and significance, 15238
 pH stability, 2610
 in relation to cutaneous lesion, 13570
 vs. vaccinogenic dose, 13568, 13569
 inclusion bodies, relation to elementary bodies in rabbit cornea cultures, 8192
 local infection and immunity processes, 887
 mechanism of infection, 886
 milkers' nodule relationship to, 4601
 Paschen bodies in relation to ultracentrifugation, 2624, 2627
 preservation by alkyl-dimethyl-benzyl-ammoniumchloride, 13572
 raw lymph, bacterial content, low temp. as affecting, 8147
 resistance of young vs. old rabbits to, 886
 vaccinogenic dosage of neurovaccine vs. dermovaccine, 13568
 virus, corpuscular nature, 13450
 crystalline nature, 15252
 culture in Maitland medium, 11622
 dissemination of nasally instilled, 2631
 Duran-Reynals factor as affecting, 15222
 effect on transplantable tumors, rabbits, 14891
 exp. lesions and inclusions in, 9945
 immunol. relation of cow-pox virus to, 15219
 lymph-node passage, 2631
 microscopic study of tissue-cultured, 4593
 neutralizing antibody, formation site, 2564
 neutralization by sera of vaccine-immunes, 6087
 preservatives for, 17219
 separation from tissue culture by tryptic digestion, 8201
 strain transformations and factors in, 2620
 tissue culture, 2620
 in agar-slants, 15233
 in placental medium, 13576
 preservation and, 13560

Vaccinites (p.1869³), phylogeny, 15981
Vaccinium (p.1866⁴). (See also *Blueberry*; *Cranberry*)
 tax., 2882, 6426, 10153, 10154
 Vacuole(s). (See also *Cell*; *Cytoplasm*; *Protoplasm*; *Vacuome*)
 in cells of *Gallus* from embryo to adult, 7111
 of onion epidermis, contraction caused by vital stains, 4951
 contractile, in *Didinium*, 6765
 physiology in marine protozoa, 15977
 water balance in *Peritricha*, 6768
 digestive, of *Flabellula*, origin and function, 3261
 and mitochondria, in *Saprolegniaceae*, system in Euglenida, 5101
 vital staining by neutral red, *Polychitum*, 7094
 Vacuome. (See also *Cell*; *Cytoplasm*; *Golgi apparatus*; *Protoplasm*; *Vacuoles*)
 of genital apparatus of pulmonates, 4342
 in striated muscle, 1729
 in striped muscle fibers, 2451
 Vagina, biopsy, detn. of sex cycle in dog, 14686
 bleeding during pregnancy, strain difference, rat, 16657
 double-zone-beta-hemolytic streptococci from, 6180
 cytology in bats, 9426
 pH, estrogens as affecting, man, 16590
 flora and, estrogen as affecting, monkey, 428
 as influenced by:
 avitaminosis A, 9292
 ergotamine and epinephrine, rabbit, 9563
 estrogen, after adrenalectomy, rat, 11405, 14643
 pineal extracts, 16604
 sex and pituitary hormones, dog, 14686
 testosterone, rat, 3899, 3908
 triphenyl ethylene, 5636
 yohimbine, 9292, 14648
 mitogenesis in epithelium, factors affecting, 12989
 polymorphous condition of mucosa and ovarian function, horse, 11071
 processes, peritoneal, closure at time of birth, 17041
 secretion, testosterone as affecting, man, 9364
 smear, in desoxycorticosterone treated women, 12987
 gonadotrophic hormones as affecting, man, 12990, 16980
 positive, in spayed mice, 422
 testosterone as affecting glycogen in cells, 2125
Spirochaeta ransonii infecting, 964
spirochaetosis, 14192
 tumors, statistical analysis, Belgrade, 13206
 Vaginitis, in cat, paracolon organism associated, 11727
 estradiol as affecting, 9643
 etiology, 17311
 Vagotomy. (See *Nerve, vagus, section*)
 Vagotonia. (See under *Nervous system, parasympathetic*)
 Vagotonin, effect on pulmonary circulation, 5608
 respiratory reflex control by, 12927
 Vagus nerve. (See *Nerve, vagus*)
 Valerian, sedative effect, detn., 16382
Valeriana (p.1867³), tax., 1158, 6437
 8842, 10150
 Valerianaceae (Dicotyledones), p.1867³
 Valeric acid, synthesis, 12039
 VALERIOA (Dicot.) (p.1867³), n. sp., 2882
 Valine, effect on anemia due to blood loss, dogs, 13264
 on growth, *Obelia*, 9208
 essential in diet, 7405
Vallesia glabra, alkaloid from, chemistry, 12027
 Vallesin, same as aspidospermin, 12027
Vallisneria (p.1864²) *spiralis*, pollination effect on ♀ flowers, 10168
Valonia, permeability to ions, kinetics, 3073
macrophysa, accumulation of electrolytes in cell sap, nitrate and halide, 3071, 3072
 ammonia accumulation in, kinetics, 10809, 10310
 bioelectric potentials in, 15723
Valsa spp., on peach, rôle in canker, 3169
Valsella (p.1861⁴), n. sp., 15453
 Valvifera (Crustacea), p.1873⁴

- Vanadium, effect on:
 growth of *Chilomonas*,12643
 phospholipid oxidation by liver tissue,5446
 tissue oxidation,207
 in organic sedimentary deposits, as derived from blood of holothurians and ascidians,14155
- Van den Bergh reaction, biphasic, study,7511
- Vanellus* (p.1881⁹), food habits,9064
- Vanessa* (p.1876⁴), pigment of excreta,12183
- Vanhoefeniidae (Myriopoda), p.1873²
- Vanilla, culture and pollination, Puerto Rico,8511
- Vanillin derivatives, pharm.,4165
- VANUOIDES** (Hom.) (p.1875³), n. sp.,8785
- Vapors, gases and, apparatus for obtaining mixtures,7309
 of plant hormones, growth-promoting activity,13890
- Vapor pressure. (See *Humidity*; *Water*, *vapor*.)
- Varanidae, eye, sclerotic plates, structure,5879
- Varanus*, olfactory formations,9676
- Variability, of elytral spots (Coleoptera), counts,3334
- Variance, analysis,3477
 recent advances,7168
 covariance, analysis, uses in field testing,5860
- Variation. (See also *Acquired characters*; *Evolution*; *Mutation*; *Periodicity*; *Season*.)
 in *Anthurium*, plants produced from seed,1236
 bud, due to wounding, sweet potato,7131
 in *Ranunculus* spp.,3514
- Varicella, in Brazil,17288
- complement fixation of antigens of herpes zoster vs.,843
- Varicorhinus* (p.1879³), n. sp.,6968
- Variation (plant). (See also *Albinism*; *Chimeras*; *Chlorosis*; *Mosaic diseases*; *Virus*.)
 infectious of *Citrus*,17777
 inheritance, *Petunia*,14860
 of plastids and anthocyanin, *Salpiglossis*,8931
 white, offspring of *Quercus robur*,68
- Variola(s). (See also *Pox*; *Vaccinia*.)
 in Brazil,17288
 chemotherapy,17243
 immunity to, duration, statistics, 6075
 immunization, by cultured vaccine virus, value,11556
 recommended procedures,11560
 vaccines and techniques compared,17131
- ovinia, antiserum-virus reactions, 9890
 immunization to,13528
 virus, absorption by animal charcoal,9890
 inoculation to donkey,956
 tissue culture,2634
 "Sacco phenomenon" after revaccination,17197
- vaccine, bacterial content of raw lymph held for prep., low temp. as affecting,8147
 elementary corpuscles in relation to cutaneous lesion,13570
 vs. vaccinogenic dose, 13568, 13569
 preservatives for,17219
 quantitative relations,13450
 vaccinogenic dosage of neurovaccine vs. dermovaccine,13568
16859
- virus, effect on skin, beef testicle and,16859
 nasal instillation, response in mice,13574
 pathogenesis, injection route as affecting,13574
 tissue culture,13574
 and preservation,13560
- Vas deferens. (See under *Testis*.)
- Vascular system (animal). (See *Blood vessels*; *Circulation*; *Circulatory system*; *Heart*; *Lymphatics*; etc.)
- Vascular system (plant). (See also *Components*, e.g., *Cambium*, *Phloem*, *Tracheids*, *Wood*, *Xylem*; plant parts and organs, e.g., *Flower*, *Leaf*, *Root*, *Stamen*, *Stele*, *Stem*, etc.; *Translocation*; *Translocation*.)
 anomalous secondary growth in *Bauhinia*,8449
 course in stem of *Myrmecodia*,2916
 in ferns,17552
- flower, of Aurantioideae,4814
 of avocado,11927
 monograph,11918
 in *Olea*,11172
 hypocotyl of *Daucus*,10167
 of leaf,4803, 6447, 8483, 10173
 leaf traces, relation to wood structure in *Salix*,17559
 of ligule of Gramineae,6450
 of seedling of *Lepidium*,4813
 staining by microinjection,11926
 of sweet corn vars., relation to drought resistance,2937
- Vasoconstriction. (See *Blood pressure*; *Circulation*; *Vasomotor system*.)
- Vasomotor system. (See also *Blood vessels*; *Blood pressure*; *Nervous system*; *Reflexes*.)
 aortic chemoreceptors and,13105
 in control of peripheral circulation,7701
 hypertensive relationships,9516
 as influenced by:
 benzedrine, dog,13146, 13178
 blood serum and extracts,14853
 CO,14823
 cocaine,7755
 cold and nembutan anesthesia, 12643
 ergot alkaloids and anesthetics, 7769
 imidazoline derivatives,9547
 isalon,11237
 Mg,7766
 metrazol,7765
 prostigmine, man,9558
 smoking,12643
 urea, dog,14842, 14842A
 veritol, man,7806
- reactions, in anoxia and asphyxia, 16731
 carotid body temp. as affecting, 12919
 constriction, momentary, proteinuria after,2189
 cutaneous, of central and nervous origin,14730
 depressor nerve stim. and,5723
 in detn. of blood pressure, rat, 9585
 extract of red cells as affecting, chem.,2333
 in foot, detn.,242
 gastric ulcers and,2106
 in hand, inspiration as affecting,4090
 of kidney, urinary chlorides and,13023
 in limbs, heat and drugs as affecting,5722
 in nasal septum and skin,12643
 in organ with fixed volume,12643
 peripheral, effect on blood pressure,9515
 in sleep,14768
 role in postoperative ulcerations of digestive tract,14583
 from tobacco smoking,12643
 tonic activity, detn.,9531
 vasoconstriction, hypertensive plasma and,11206
 vasodilatation, papaverine and, 11186
 in parietal cortex, cat,4063
 reflexes, aortic depressor response, effect on aortic pulse wave velocity,4060
 barbiturates as affecting,16752
 chemo., of carotid body origin, efferent pathways,12643
 control of skin's blood-flow, adrenalin and,16732
 depressor, from nose and throat,12643
 duodenal distension,9514
 effect on liver vol.,5597
 nerve impulse frequency and,4009
 vasodilatation test in peripheral vascular disease,11197
 in young rabbits,7704
 regulation of limbs, study, 13125, 13126
 renal vasoconstrictor substance, production,7731
 threshold values for nerves controlling,2231, 2232, 2233, 2235
- Vasotrema* (p.1870³), tax.,6788
- Vavaea* (p.1866¹), n. sp.,13768
- Veal. (See *Cattle*; *Meat*.)
- Vectors. (See also *Carriers*; *Fomites*; *Insects*, as vectors.)
 ticks as, of animal diseases,10025
 of filterable Rickettsia-like virus,4583, 4584, 4585, 4599
 in India, control,11707
 of Q-fever-like disease,17285
 of rabies,9952
 of relapsing fever,2670, 4669
8273, 15296
 of Rocky Mountain spotted fever,8298, 11688, 11689
 of tick bite fever, S. Africa,8203
- of tick-borne diseases, Uganda, 2718
 of tularemia,4681, 11689
 of typhus,8291, 13583
 of undulant fever,10011
- Vegetables.** (See also *Crops*; *Diet*; *Horticulture*; and especially under individual vegetables, e.g., *Spinach*, *Tomato*.)
 botulism from home-canned,17883
 Ca in, availability,2034
 carbohydrate fractions, detn., 9126
 deficiencies of minor elements as affecting,2992
 diseases, in city markets, 15889, 15890
 in U. S. A., handbook,3167
 control in greenhouses,1468
 handbook,17848
 progress rept., Univ. Bristol,1478
 disinfection, portable apparatus for,3157
 fertilizers for, on muck soils,1248
 frozen, enzyme activity in,2726
 frozen-pack, micrococci in,10047
 green, addition to wheat-and-milk diet, effects, rats,2006
 available Ca in,10961
 I in, Texas,17627
 iron in, availability,307
 microbial content, statistics,13675
 morphology, book,1170
 on muck soils, Michigan,1240
 water relations,1234
 oxalic acid in, dietary fate,16459
 P as affecting,13869
 pitting in storage, temp. and humidity as affecting,13898
 products, commercial, textbook,2722
 quality changes after harvesting, methods of evaluating,13893
 seed viability, moisture and temp. as affecting,15586
 shade as affecting,13914
 for southwest Texas, choice, of ecological factors as affecting, 2990
 tropical, storage and transport, book,3009
 vars. grown in Scandinavia,1227
 vit. A in,314
 in East Indian,9221
 vit. C in, CO₂ as affecting,1271
 Texas,6509
 water, vit. C in, China,339
 yield and root growth, method of applying fertilizer as affecting,13902
- Vegetable weevil.** (See *Listroderes obliquus*.)
- Vegetation.** (See also types and formations, e.g., *Bogs*, *Grassland*, *Forest*, *Communities*; *Succession*; etc., under headings in *Geographic Index*.)
 of "Black soils", of Germany,7188
 of Caddo County Canyons, Oklahoma,3506
 of calcareous sand areas, Surrey,129
 of Cape Napier, Spitsbergen,16256
 changes, effect on grasshopper outbreaks,1498
 in exptl. pastures, fenced enclosures and open range, California,12598
 as result of furrowing on pastures and ranges,10791
 climatic types in Nuevo Leon, Mexico,12593
 climax, in relation to soil profiles, Morocco,7204
 close-growing, infiltration of rainfall and,14833
 of Columbia River Gorge, U. S. A., 9021
 of Danish conifer plantations, analysis,5382
 development, in middle European glacial and post glacial period,12585
 fire in land use and management, 12590
 of Five Islands, ecological survey, 3481
 of grass verges and trodden habitats,118
 of Great Plains, drought as affecting, U. S. A.,5369
 ground cover, effect on frost penetration of soil,14382
 interglacial, in Europe,9018
 of Italian East Africa,12597
 litter, in broadleaved Swedish forests,7203
 of Mexico, types in relation to physiographic regions,16266
 modified by forest fire in Norway, 15643
 of Morocco,7206, 9029
 of northern Rumania,2890, 13765
 plant indicators as relating to land use problems,16264
 in relation to soil pH,5381

- Vegetation (*continued*)
 sampling, on range plots,.....17571
 of Santiago del Estero (Argentina),.....13774
 of scoria and clay buttes, North Dakota,.....12804
 of seleniferous soils, S. Dakota,.....3508
 of Sonora,.....3367
 of Spain,.....7219
 succession in relation to soil develop-
 ment, North Dakota,.....7197
 surface, in relation to soil content of
 viable seed and altitude,.....16261
 survey in New Guinea,.....8507
 of Tasmania,.....16263
 tree, soil moisture as related to,.....6531
 trends in variation,.....10782
 types, ecological survey N. Rhodesia,.....9034
 in India, factors affecting,.....10773
 in Morocco and S. Australia, com-
 parison,.....7209
 relation to climate, Morocco,.....7192
 to land utilization, ecology,.....10785
 survey, aerial photography as aid in
 study,.....1838
 vernal pool,.....7211
 of Vorpö Jutland,.....3518
 Vegetative nervous system. (See *Nervous
 system, autonomic*.)
 Vegetative propagation. (See *Propagation*.)
 Vegetative reproduction. (See under *Re-
 production, plant*.)
 Veins. (See under *Blood vessels*.)
 Velaea (p.1866³), n. var.,.....10136
 Velanopus (p.1862⁹), review,.....15462
 Veld. (See *Desert, semi*; *Grassland*.)
 Veletia (p.1869⁹) veletia, nematocysts
 descr.,.....15984
 Venenarius (p.1862⁹), n. sp.,.....4737
 Venereal disease(s). (See also *Gonorrhea*;
Syphilis.)
 control, advances in, Pan-American
 campaign,.....13633
 results in Canada,.....11675
 diagnosis, biopsy rôle,.....15326
 virus of bovine vesicular, in bovine
 abortion etiol.,.....15364
 Veneridae (Mollusca), p.1872⁴
 Venins. (See also *Antivenins*; *Venoms*.)
 Venom(s). (See also *Antivenins*; *Venins*.)
 antivenins, mice as test animals for,
17148
 bee, allergy to,.....15159
 effect on blood, rabbit,.....18149
 immune serum and toxicity,.....18148
 properties and immunization to,
13477
 bee, wasp and ant, hyposensitization, by
 whole bee extract,.....15156
 of black widow spider, antivenin pro-
 duction against,.....9888
 mosquito, stability in vitro,.....18455
 preservation by alkyl-dimethyl-benzyl-
 ammoniumchloride,.....13571
 scorpion, preservation and antiserum
 production,.....17201
 toxicity,.....11215
 snake, action,.....5164
 anticoagulating properties, factors
 affecting,.....3636
 of *Bothrops* effect on blood coagula-
 tion, rabbit, dog,.....5833
 clot-inducing and neurotoxic com-
 ponents, immunol. relations,
864
 coagulation effects, inhibition by
 antisera,.....7848
 crotalidic antivenins to, polyvalent
 vs. monovalent,.....15188
17142, 17143
 of *Diplohidus*, action and treatment,
12436
 effect on:
 blood clotting,.....875
 blood sugar, 13174, 16804, 16805
 dehydrogenase,.....10850
 kidney, and liver,.....12643, 18166
 hemolytic action, and liberation of
 histamine by,.....14859
 x-ray as affecting,.....12697
 as influenced by:
 cholesterol preps.,.....819
 copper treatment,.....13454
 snake-serum therapy,.....9880
 isolation of active principles,.....6050
 action and review,.....14506
 liberation of histamine and formation
 of lysoctithin by,.....520, 521
 nature of poisonous component, 864
 neutralization by heterologous anti-
 venenes,.....4467
 pharm.,.....12643, 13165
 protease in,.....188
 regional variations in activity,.....4160
 spreading factor, effect on action,.....2529
 tolerance to, rabbit,.....16805
 toxicity, glutathione as affecting,
16755
 yield of water, moccasin,.....16061
 toad, chemistry,.....53573
 Venous pressure. (See *Blood pressure*.)
 Ventilation. (See *Air*; *Atmosphere*; *Oxy-
 gen*.)
 pulmonary. (See *Respiration, alveolar*.)
 Ventricle, brain. (See under *Brain*.)
 heart. (See under *Heart*.)
 Venturia inaequalis. (See also *Apple scab*.)
 on apple, control,.....6681
 Venus (p.1872⁴) mercenaria, anaerobic gly-
 colysis in,.....10981
 shell movements, temp. as affecting,
9055
 Vepris (p.1866³), n. spp.,.....2823
 Veratrine, alkaloids in, verine,.....17666
 cardiac supernormality due to,.....11177
 effect on amphibian lymph hearts, 16735
 on auricle,.....7726
 muscle contracture, end-plate rhythm
 and,.....5703
 propagation,.....2253
 muscle sensitization to K ions by, 14739
 synergic with HCN,.....5733
 Veratrum spp., effect on locomotion of
Daphnia,.....17670
 viride, bioassay, pigeon emesis method,
14798
 Verbascum (p.1867⁹), n. sp.,.....8444
 flowers of, microscopic drug picture,
6537
 Verbenaceae (Dicotyledones), p.1867¹
 Verecundum (p.1879⁹) rasile, status and
 syn.,.....10626
 Veretillum (p.1869³), n. spp.,.....3413
 Veritol, effect on circulation,.....4142, 7806
 on femoral vein, cat.,.....7776
 pharm.,.....555
 vermicide, vermifuge. (See *Anthelmintic*.)
 Vermicularia (p.1862⁹), n. sp.,.....15453
 Vermivora, (p.1882²) virginiae, nesting,
1640
 Vernalin, hormone causing flowering in
 biennials,.....8571
 Vernalization, of cereals, low temp. and
 O₂ lack as affecting,.....1188
 rôle of auxin in,.....6565
 effect on growth-hormone formation,
 cereal grains,.....17681
 exposure of wild beets to,.....12539
 of oats, vars. compared,.....1208
 of potatoes,.....15560
 relation to sex, angiosperms,.....6558
 of unripe grain, wheat,.....17693
 of wheat,.....13844
 effect on respiration and moisture
 content,.....14026
 Vernonia (p.1867⁴), n. sp.,.....13751
 dist. and hybridization,.....10156
 Veronal. (See *Barbital*.)
 Verruca, tar, development, breast carci-
 noma as affecting, mouse,.....7823
 Verrucaria (p.1861⁴), n. spp.,.....17503
 Verrucariaceae (Pungi), p.1861⁴
 Verrucoides (p.1863³), taxonomy,.....11844
 Verrucosis, lymphostatic, in negroes,
 Africa,.....12256
 Vertebra(e). (See under *Bone*.)
 Vertebral column, anomalies,.....13338
 chordoma,.....18204
 development, in Salientia,.....5880
 in *Eusthenopteron* (Pisces),.....5163
 Vertebrata (p.1878³), blood prothrombin
 in,.....3654
 brain, anatomy and evolution, book,
16968
 central nervous system, melanin pig-
 ment in,.....7944
 cerebrosides in brain,.....5694
 diurnal rhythms,.....9452
 effects of irradiation with short wave
 lengths, review,.....3485
 erythrocytes, planimetric measurement,
667
 evolution of pituitary gland,.....5898
5899
 gall bladder, function and evolution,
3752
 Mn in, function,.....9163
 marine, serum proteins in,.....12765
 olfactory formations, comparison, 9676
 parthenogenesis in, sex ratio,.....17044
 phyletic occurrence of pituitary in,
5898
 prothrombin conversion in,.....7392
 skull development, book,.....4304
 social behavior in, evolution,.....8883
 of Tahiti,.....1676
 Verticillium, on elm, as cause of wilt, 1426
 albo-atrum, causing wilt of *Capsicum*,
10849
 dahliae, on endive,.....4961
 Vertigo. (See *Ear, labyrinth*; *Nystagmus*;
Vestibular apparatus.)
 Vespa, ability to distinguish colors, 18028
 homing sense, habits,.....18027
 venom, hyposensitization to, by whole
 bee extract,.....15156
 germanica, social instinct of,.....10609
 Vespertilionidae (Mammalia), p.1882²
 Vespoidea (Hym.), p.1878⁴. (See also
Wasps.)
 annotated list, Mozambique,.....3352
 Vessels (plant). (See also *Vascular system*;
Wood; *Xylem*; under plant parts,
 e.g., *Root*, *Stem*, etc.)
 latex. (See *Laticiferous tissue*.)
 Vestibular apparatus. (See also *Brain*,
nuclei, vestibular; *Ear, labyrinth*;
Equilibrium; *Nystagmus*; *Posture*.)
 function, exact caloric testing,.....9467
 past pointing and galvanic falling, electro-
 kinesia in endolymph as cause,
14734
 reflexes, partial failure,.....9489
 tonic neck reflex and,.....4298
 Vetch(es). (See *Vicia*.)
 Veterinarians, brucellosis in,.....8300
 rôle in trichinosis control,.....17922
 Veterinary medicine, chemotherapy in,
11601
 research, Australia,.....2697
 Rhodesia,.....2701, 2717
 Uganda, report,.....2718
 Vervazulen, synthesis,.....3563
 Vervet, vervetone from, chemistry, 12050
 Vervetone, from vervet, chemistry, 12050
 V-factor. (See *Factor-V*.)
 Viability. (See *Longevity*; *Pollen*; *Seed*;
Spore.)
 Vibria (p.1874³) wolterrecki,.....16015
 Vibriliidae (Crustacea), p.1874³
 Vibrio (p.1861¹), in bovine abortion
 etiology,.....15364
 chem., metabolism, serology and sur-
 face activity of strains corre-
 lated,.....1058
 electrophoretic behavior of strains,
1058
 hemolysis by strains,.....6186
 variability, in house fly,.....6310
 cholerae, aerobic metabolism of *V. el-tor*
 vs.,.....6297
 pH of cultures of related vibrios and,
6316
 inhibition of exp. paratyphoid by
 minimal amounts,.....9877
 oxidation-reduction potentials of re-
 lated vibrios and,.....6316
 proteolytic enzymes,.....3354
 serological and cultural comparison
 of *V. el-tor* with, 6191, 6192
 variability, in house fly,.....6310
 viability, in watermelon,.....4647
 comma. (See also *V. cholerae*; *Cholera*.)
 antigenic structure,.....2568
 dissociation and antigen relations of
 strains,.....17443
 somatic antigen and antibody, diag-
 nostic value,.....8095
 desulfuricans, morph. and factors affect-
 ing,.....6320
 sources and isolation,.....6320
 spore formation by, factors in, 6320
 el-tor, aerobic metabolism of *V. cholerae*
 vs.,.....6297
 antitoxin, prep. and properties, 13498
 proteolytic enzymes,.....3354
 serological and cultural comparison
 of *V. cholerae* with, 6191, 6192
 toxin, prep. and properties,.....13498
 Vibriose septique. (See *Clostridium septi-
 cum*.)
 Vibernum (p.1867³), silver-leaf disease,
 histopathology,.....17847
 U. S. spp. value as ornamentals,.....6524
 † cuneatum (Meliosma)(E),.....17477
 Vicia (p.1866³), relational coiling in
 chromosomes,.....1702
 nodulation, fertilizer as affecting,
8472
 angustifolia, chromosome numbers in
 nodules and roots,.....49
 cracca, photoxan in,.....17669
 faba, absorption by various root zones,
6559
 dynamics of "traction fibers" in
 mitosis,.....10721
 infection of, with pea virus I., 3128
 influence of chloral hydrate on
 mitosis,.....10720
 mild mosaic, new virosis,.....12140

- root permeability, transpiration as affecting,13992
villosa, nodule formation and N content, fertilizers as affecting,8472
 seed viability, storage conditions as affecting,15726
Vigna (p.1866⁴), n. sp.,2870
sesquipedalis, *Erysiphe polygoni* on, resistance,17814
sinensis. (See also *Coupea*.)
Viguiera (p.1867⁴), n. sp.,2385
Villadia (p.1865⁴), n. combs.,2387
Vinago delalandei, new tapeworms from,15988
Vinca (p.1867⁴) *major*, phloem development and flowering,10172
 Vincent's angina. (See also *Borrelia vincentii*: *Fusio-spirochaetosis*, oral.)
 flagellated *Fusiformis dentium* plus *Borrelia vincentii* from,15418
Vincetoxicum (p.1867⁴), n. spp.,2828A
2882, 6429
 Vinci, Leonardo da, biography, book,12484
 Vine(s). (See *Grape*.)
 Vineyard(s). (See *Grape*.)
Viola, tax.,1158, 2844, 4800, 13754
 spp. in Colorado,17540
tricolor-V. lutea hybrids, cytology and morphology,14358
 Violaceae (Dicotyledones), p.1866²
 Violales (Dicotyledones), p.1866²
 Viosterol. (See *Ergosterol*, irradiated.)
Viper russellii, venom, effect on blood sugar,13174
Vipera (p.1880⁴) *aspes*, coccidia in intestine,12286
lebetina, taxonomic notes,6986
palaestinae,6986
russellii, venom, isolation of active principles of,6050
 Viperidae (Rept.), p.1880⁴. (See under *Snake* and *Venom*.)
 Vireo, Bell's, desc. and life history, book,8840
 white-eyed, nesting in Penna.,6996
Vireo (p.1882⁴) *huttoni* caroliniae,1642
 Vireonidae (Aves), p.1882⁴
 Virescence, of abnormal floral organs, angiosperms,15522
 Virulence, bacterial. (See *Bacteria*, virulence.)
 Virus(es). (See also *Filterable forms*: *Inclusion bodies*; *Mosaic diseases*. In the main, indexing is done under diseases, e.g., *Foot-and-mouth disease*, *Rabies*, *Tumor*, *Variola*, *Tobacco mosaic*, etc., and under organisms, e.g., *Mycobacterium tuberculosis*. Under "Virus" are entered only those papers of comparative interest or concerned with the less studied diseases.)
 abortion in mares due to (?),3324
 action, quantum relations,15377
 adapted, and immunizing value, review,860
 azoprotein enhancing effect on lesions due to,11521
 B., culture on chorioallantois,9942
 immunol. relations to herpes virus,9943
 bile salts as affecting,9954
 books,8209, 9950, 15410
 in bovine abortion etiology,15884
 in bovine mastitis,15254
 bronchopneumonia, porcine,11625
 cat disease due to,6169
 as cause of kidney tumor of frog,2864
 of sympathetic ophthalmia,2384
 from *Dermacentor andersoni*,4584
 persistence through egg and all stages,4599
 diseases, book,9950
 of Brazil,17288
 chemotherapy,6146
 books,9917, 17243
 of corn ear worm,10455
 immunity and active immunization in, review,17210
 medical, book,9902
 survey,6161
 distemper associated with lymphocytic choriomeningitis,2612
 ectromelia, microscopic study of tissue-cultured,4593
 effects resembling, from encephalomyelitic vs. normal mice,15241
 of fish,11629
 fish diseases due to,959
 guinea pig disease due to,2635
 Hodgkin's disease and,15232
 immunity to, mechanism,889
 Virus (continued)
 inclusion bodies of erythrocytes, review,6158
 in infective hepatitis etiology (?), 8197
 -like particles, from rheumatic fever exudates, agglutination,17130
 of livestock diseases, wild animals as carriers,8321
 of man, animals and plants, book, 8209
 mastitis (nonspecific bovine) due to (?),6244
 methods of study,4587
 milkers' nodule, vaccinia in relation to,4601
 nature, books,8209, 9950
 nature and origin,2621
 neurotropic, neutralization in tissues by antibodies, time factors in,8111
 neurovaccine, corpuscular nature, 13450
 neutralization in tissues by antibodies, specific factors,8114
 new concepts,8211
 origin, parasitism, relation to bacteria, theoretical,4587
 particle size detn. by ultrafiltration and ultracentrifugation,15246
 photographing, technic,5257
 physico-chemical characters,4587
 plant, acquired immunity, to curly top virus, tobacco,15864
 acquired tolerance, in tobacco to curly top,1482
 analysis, interpretation and precautions,1438, 1440
 antibody production, in tobacco recovered from curly top, 17795
 antithetic action, in tulip mosaic,1439
 aphids as celery mosaic vectors, 3348
 bibliography,14066
 of cabbage, black ring, descr., 4980
 of celery,17778
 cell inclusions, relation to virus proteins,6644
 cellular pathology,12186
 of cucumber mosaic,14062
 of tobacco mosaic,14069
 chemical and cytol. aspects, review,3122
 chemical detection, in host sap, 3169
 of cherry,17783
 classification of American and European potato viruses,3123
 in relation to effect on host, 3124
 compared with animal viruses, 1441
 complexes, chemical separation, 3118
 conc. in green and mottled tissue,1442
 of currant,10359
 differentiation, by gold sol reaction,10361
 host-index,14059
 host-parasite relations, review, 3124
 immunity, of potato from X virus,10362
 immunological reactions, of strains of cucumber mosaic, 17787
 inactivation, by heat treatment, 3169
 of tobacco mosaic and necrosis,3169
 by insect juices,10357
 by HgCl₂, tobacco necrosis, 8612
 by microorganisms,12184
 by oxidation, protection against,8608
 by urea soln.,17792
 infectivity, insect fluids as affecting,3169
 insect dissemination, mechanism in cassava mosaic,1443
 insect relations, review, 8615, 10363
 insect transmission, inoculating cage,15886
 isolation, of potato X and tobacco mosaic viruses,8613
 of Liliaceae,1434
 host range,1434
 of *Mathiola incana*,4981
 migration, in sugar beet mosaic, 1482
 migration in tobacco mosaic,3169, 15825
 mol. wt., detn. by ultracentrifuge,1444
 of mosaic complex in *Lilium longiflorum*,3169
 of narcissus,17779
 nomenclature,10360, 12133
 nucleic acid, constitution and properties,17784
 of papaya,14067
 of pea mosaic, properties,3128
 of peach X-disease, dist. in U. S. A.,15889
 Virus (continued)
 plant (continued)
 of pear stony pit,3169, 6654
 of pineapple yellow spot, dist., 6646
 of *Psidium sativum*,3169
 of potatoes, identity,6647, 6649
 isolation and properties,6650
 separation of *Solanum* viruses,6650
 of potato latent mosaic, acquired immunity,3131
 properties,3131
 of potato yellow dwarf, properties,3119
 of potato yellow mosaic,3169
 protein, mol. wt. detn., from X-ray diffraction,3169
 of *Nicotiana glauca* 6, isolation and properties,6658
 of potato latent mosaic,3126
 of tobacco mosaic, properties,3125, 3127, 15822, 15823
 from tomato bushy stunt,4974
4976
 of radish mosaic, properties and hosts,6659
 reproduction theory,17786
 research, review,8614
 resistance to vectors in raspberry,8637
 in sap culture medium, effect on growth of fungi,5014
 spotted wilt, on dahlia, S. Africa,6629
 strain differentiation and immunization,1443
 of sugar beet curly top, properties,1482
 of sugar beet yellows, hosts, 15829
 of sugarcane, classification by immuno-reactions,3169
 of tobacco mosaic, activation, 6651
6652
 conc. in host, N nutrition as affecting,3169
 crystallization,17780
 hexagonal crystals,15824
 longevity, fluorescing as affecting,6656
 migration through host plant,3169, 15825
 mol. structure,15834
 N constitution,3130
 physico-chemical properties, 15826
 staining reactions,6653
 types and interactions,3133
 of tobacco necrosis, properties, 3129
 of tobacco ringspot, isolation and properties,15830
 properties in recovered plants,15831
 seed transmission,15833
 of tomato tip blight, properties and hosts,6655, 15827
 transmission, by leaf contact, in potato,8611
 translocation region,17712
 of turnip mosaic, properties and hosts,8616
 u.-v. absorption spectra of potato latent and tobacco ringspot,17783
 of *Vicia faba*,12140
 of Western celery mosaic, properties,3132
 pox of pigeons vs. fowls,2633
 preservation by freezing and drying in vacuo,15253
 problem, in sarcoma production, 16887
 of psittacosis-like bronchopneumonia, in man and stormy petrels,4589, 4600
 Q-fever-like disease, tick transmission,17285
 recent advances in knowledge,7069
 respiratory tract infection associated with new,17287
 Rickettsia-like, from *Dermacentor*, tissue culture,4583
 rinderpest goat-blood, viability in incubators,13666
 Rocky Mountain spotted fever, agar-salt tissue culture,4586
 scarlatina in relation to,11613
 sheep-pox, inoculation to donkey,956
 spread in nerves and affinity for gonads,9947
 submaxillary-gland of guinea pig, pathogenicity and cytol. reactions,13579
 technic of study, book,8209
 textbook,15427
 from ticks, Q-fever relations,4585

Virus (continued)

- tissue culture,9942, 11612
in placental medium,13576
of Rickettsias,4582
yolk-sac method,15249
transformation of rabbit fibroma negative,11549
- Viscera. (See also *Organs*.)
ablation, cortin as affecting work capacity after,3841
complete transposition associated with congenital dextrocardia,9779
hypertrophy, in hyperthyroidism, after hypophysectomy,9663
lesions in acute disseminated lupus erythematosus,9613
mycoses,4645
situs inversus,11459
transposed, inheritance, man,7161
- Visceral pouches, cystadenoma lymphomatous,7833
4th, development in dog,4379
thyroid parenchyma and, review,15064
and nephridia, development in chordates and prochordates,9761
skeleton, hyomandibular bone transition from fish to tetrapod,9679
- Viscosity, of blood. (See under *Blood*.)
of butter, measurement,4416
of mineral oils, tumorigenesis and,16886
of tumor cells,4198
detn. by ultracentrifugation,3446
- Viscum. (See also *Mistletoe*.)
album, extract, effect on heart,5748
seed germination, method and factors affecting,12074
- Vision. (See also *Blindness*; *Eye*; *Images*.)
accommodation, axial shift of post. lens pole,13064
changes in post. lens surface during,2209
convergence and, measurements,11135
in mammals,4000
acuity in pigeon,9435
adaptation, peripheral, during 24 hrs.,16680
aniseikonia, measurement, instrument for,3600
inocular coordination,9470
brightness discrimination, stepwise phenomenon, rat,7620
cobra venom and opiates as affecting,12643
- color. (See also *Color blindness*.)
hypoxemic asthenopia altitude as affecting,9468
inheritance of monochromasy, man,3472
in monkeys,14705
principle governing changes in hue, saturation and lightness in chromatic illumination,9475
sensitivity, caffeine as affecting, 9478
in *Vespa* spp.,18028
vit. A as affecting,5876
- dark adaptation, in avitaminosis A, endocrinopathies and,9664
curve, O₂ lack as affecting,14700
measurements with constant and natural pupillary apertures,12643
pupil dilatation and,16677
dark-adapted, brightness threshold measurements at all ages,11126
depth perception studies with parallaxoscope,9471
discriminometer, descr.,7629
duplexity theory of response,2197
dysadaptation test, vit. A deficiency and, Africans,11341
excitation, specific constants for,2200
eye and brain as factors in,5688
eye preference in,2206
factors in reading,9476
flicker response, contour for *Asellus*,7631
for genetically related fishes, 7632
in *Pseudorasbora*,7628
temp. and critical intensity for,2199, 7630
registration, supplementary apparatus,12643
hemianopsia, bitemporal, traumatic,9480
hydroxyethylapocupreime as affecting,4233
induced size effect,2214
with restricted fusion stimuli, 14708
intensity discrimination, apparatus for measuring,438
minimal, law for,2198

Vision (continued)

- intensity (continued)
relation between $\Delta I/I$ and intensity for different parts of spectrum,438
light adaptation at fovea,7649
light sense, testing, instruments and techniques,16393, 16394
mechanism after partial destruction of area striata, rats,4329
optic dosage measurement without use of color standards,13063
pattern-discrimination, recovery after unilateral occipital lobectomy, monkey,16671
subcortical mechanisms in,2173
resolution, factors limiting,12643
and visibility of single lines at various illumination,11127
role in estrus,13071
in inhibition of activity of grouped fish,434
of lactoflavine in,2217
scotopic retinal visibility curve,2211
separation, limit and application to vision in instruments,11132
stimulus intensity, threshold, retinal position and,7629
theories, book,5687
in ultra-violet light, fish,13057
visual fields, defects, localizing value of incongruity in,7644
homonymous defects, spatial disorientation with,7646
- Visual pathways, blood supply,668
Visual purple. (See under *Pigments*.)
Visual system. (See *Brain*; *Eye*; *Nerve*, *optic*.)
- Vitaceae (Dicotyledones), p.1866²
in Tertiary Europe,2783
- Vital capacity. (See under *Lungs*.)
Vital stains. (See under *Staining methods*.)
Vital statistics. (See under *Statistics*.)
Vitalism. (See also *Mechanism*.)
relation to "autonomism,"10675
Vitameter, value in test for vit. A,2054
Vitamin(s). (See also *Bios*; *Factor V*.)
agricultural production in relation to human nutrition,13689
biological assay, standardization,8069
book,7403
chick antidermatitis factor,3730
color reactions with furfural and H₂SO₄,16383
deficiency, effect on:
ascorbic acid in tissues,13275
body enzymes,11347
endocrine glands,892
rats,2049
tropical ulcers,5847
nervous system lesions and,2004
oral path. and, monkeys,7893
effect on:
growth of *Lupinus albus* seedlings,12643
growth of roots, *Allium*,12063
spore germination,15787
in elephant milk,7467
fat-soluble, review,14440
in foods, tables,9173
in fresh, pasteurized and mature cheese,5549
of fruits and vegetables,2722
in garlic,17667
hormones and, book,5551
interrelation,7466
lack, of animals,15383
dwarfism and,4264
in *Lemna*, formation and effect of storage,15736
lipids, sterols and,9201, 9202
in nutrient sols., for excised tomato roots,8574
in ophthalmology,16500
relation to acetone in animals,2692
to ataxia in animals,2692
to convulsions in animals,2692
required by orchid seedlings, sources, chemistry, and action,6571
by guinea pig,16499
by pigs,12852
reviews,2053, 7069, 7245, 14441
in roe and fish liver, preservation as affecting,5550
in skin and scales, fish,16502
surface phenomena of water soluble,3712
in tomato pomace,3711
water-soluble, discussion,313
effect on tumors,11291
review,14440

Vitamin (continued)

- A. (See also *Xerophthalmia*.)
absorption, in celiac disease and cystic fibrosis of pancreas,16556
from oils by soaps formed in situ,7471
activity, of apo-2-carotinal,2055
factors affecting,5552
in alfalfa and corn silage,17068
in alfalfa-leaf meal, storage loss,4426
application to skin lesions, guinea pig,7472
in *Attalea* oil, relation to carotene content,10832
in blood, Dutch E. Indies,316
in pregnancy and lactation, Batavia,318
serum lipids and,16508
in cacao bean seed germ,7474
carotene from alfalfa as, for poultry,15127
catalytic effects of porous powders on,5553
cyclized, in fish liver oils,9220
and D, in cod liver oil, book,15686
deficiency, alimentary anemia in infants and,4250
in animal diets,2499
in *Ascaris* infection expts., monkey,15946
in calves,11004
detn. by dark adaptation in endocrinopathies,9664
diagnosis and therapy,11349
effect on:
blood picture,10879
blood vessels, rats,7892
estrus and activity cycles, rat,9358
labyrinthine capsule,3718
prothrombin clotting time, chicks,12757
rate of apposition of dentin,3719
retina, rat,10999
tuberculosis,2378
vaginal cornification,9292
exercise as affecting growth in, rat,10998
lesions resulting from, rat,3715
man,317, 12643
nerve fibers in epithelium in, rats,11398
nervous disturbances in pigs due to,6242
pectin as affecting, rats,11340
renal calculi formation due to, summary,14953
and surfeit, effect on thyroid and hypophysis, rat,9223
tissue metabolism in,340
visual dysadaptation test, Africans,11341
depletion and subsequent pregnancy, rat,3714
destruction by rancid fats,2058
detn.,12835
in blood,3585, 16350
in feeds,13351
in hen's egg,3713
in milk,8092
in organs,14557
distr. of A₁ and A₂ in fish,110052
in dried citrus pulp,8068
in East Indian vegetables,9221
effect on:
ability to match colors,5376
canine distemper,11753
complement in health and disease,2573
immune potencies,2573
pancreatic secretion in hypochlorhydria,3754
urea and inulin clearances, dog,7566
esters, prep., properties and potency,11003
excretion, urinary,7560
in fish oils and vegetables,314
in halibut intestinal oil,11002
from leproline,16509
in liver cell tumors, rats,11286
in liver, diet as affecting rate of depletion, rat,3716
relation to poultry disease, hen, 786
storage in scorbutic guinea pigs,11337
in tuberculosis, man,16503
in milk fat, factors affecting,8090
in mutton bird oil,9216

SUBJECT INDEX

Vitamin

Vitamin (continued)

A (continued)

- in North Sea plankton,.....12607
- overdosage, effect on liver,.....16560
- effects, rats,.....12836
- in Pacific fish oils,.....10996
- requirement, of cattle on cottonseed meal ration,.....16507
- detn., rat,.....16506
- for growing chicks,.....8094
- for laying hens,.....6012
- man,.....5554, 9219
- of shark liver oil, for poultry, 17109
- in silage, colorimetric carotene vs. bioassay,.....15106
- stability, in cod liver oil,.....17097
- to fatty peroxides,.....7478
- to light,.....7470
- in rations,.....11505
- standard, vit. A-scope and,.....16504
- supplement, value in pig ration, 15098
- tests for,.....321
- comparison,.....2054
- therapy, man,.....10997
- in night-blindness,.....4266
- in renal rickets, children,.....2342
- topical application,.....16505
- in winter milk, effect of fodder fed,.....13859
- A₂ from carotene, fish,.....11005
- B. (See also Beriberi; Black tongue; Flavines; Pellagra; Polyneuritis; Thiamin.)
- in California grape juices and wines,.....13672
- chick antidermatitis factor, in meat,.....16529
- pantothenic acid and,.....12843
- in yeast,.....16522
- in cassane leaves,.....271
- in cooked and raw cassava and mandioca,.....9224
- deficiency, in canine blacktongue,.....3726
- effect on:
 - appetite,.....3728, 12643, 16525
 - estrous assay, rat,.....16610
 - histaminase in kidneys, rat,.....12683
 - liver,.....16514
 - maze learning, rat,.....9447
 - N metabolism,.....5558
 - equine disease due to,.....17384
 - fat of dehydro-cholic acid and,.....16923
 - histopath, chicks,.....16523
 - in muscular dystrophy,.....9625
 - tissue metabolism in,.....340
- effect on:
 - body fat, rat,.....3724, 9231
 - cancer production,.....12846
 - carcinoma from benzpyrene, mouse,.....16519
 - insulin action and sugar tolerance, rat,.....3720
 - iron balance, infant,.....2087
 - pericardites of unknown etiology,.....7724
 - rooting of cuttings,.....11991
 - vit. C deficiency,.....5572
 - tissue culture,.....11009
 - factor 8B, rat,.....7484
 - factor W and,.....12838
 - in foods,.....7476
 - growth factor W, rat,.....7463
 - growth, metabolism and,.....319
 - in *Helianthus tuberosus*,.....7469
 - insulin tolerance and, rat,.....3725
 - 12643
 - 16515
 - in liver extracts,.....16515
 - relation to insulin hypersensitiveness of pellagrins,.....14945
 - in rat peltis, factor affecting, 12844
 - requirement of pig,.....11010
 - review,.....14559
 - studies in fowl,.....323
 - S containing amino acids for growth and,.....16482
 - supplement, effect on methionine deficient diet,.....16479
 - therapy, in beriberi and pellagra,.....13268
 - man,.....10997
 - tikitiki as a source,.....16479
 - water soluble,.....11007, 11008
 - estimation of yeast eluate factor and yeast filtrate factor by rat growth,.....7461
 - liver fraction similar to yeast eluate and filtrate,.....7478
 - requirements, pig,.....7477
 - in winter milk, effect of fodder fed,.....13859

Vitamin (continued)

B₁ (See also Thiamin.)

- action and synthesis, test with *Phycomyces*,.....1398
- assay, curve of response to synthetic thiamine, rat,.....10111
- 18712
- technic,.....14553
- whey as substratum in,.....14558
- assaying for with *Phycomyces*, method, 1398
- bacterial synthesis of co-carboxylase from,.....10057
- in beriberi therapy, causing pellagra, 14943
- bioassay,.....14557
- as *Brucella* growth factor,.....13706
- in cases of amputation stump neuralgia,.....14562
- cereals as source, review,.....14564
- choline-esterase inhibition by,.....7264
- co-carboxylase converted to,.....2064
- color reaction for,.....16524
- conc. in tissues, rat,.....5565
- in culture media, for fungi,.....1082
- deficiency, anorexia in, morphine as affecting,.....5848
- and beriberi,.....14952
- breed differences in resistance to, fowl,.....8093
- diagnosis and therapy,.....11349
- effect on:
 - ant. pituitary and thyroid, rats,.....7967
 - histopath. of peripheral nerves, rat,.....11343
 - thyroid and pituitary,.....14939
 - 14940
 - vit. C in endocrines and tissues,.....14975
 - in hookworm anemia,.....16925
 - inactivity of nicotinic acid in,.....13273
 - localization of cerebral lesion, rats, fowls,.....5849
 - nerve degeneration in,.....2061
 - paralysis in foxes due to,.....11787
 - polyneuritis and edema in,.....4258
 - pyruvic acid metabolism in,.....7806
 - 9628
 - in Wernicke's encephalopathy,.....7904
- detn.,.....3594, 16511
- in blood,.....4261, 5492
- chemical,.....5560, 5561, 5562
- fermentation method,.....16333
- in urine,.....3587, 12732
- by yeast test,.....12842
- distr. in meat,.....7481
- effect on:
 - amyotrophic lateral sclerosis, 9624
 - blood bactericidal action on staphylococci,.....2516
 - blood sugar in diabetes,.....7430
 - body wt. in hyperthyroidism, 2060
 - carbohydrate metabolism, man, rabbit,.....5559
 - cataractogenic action of galactose,.....2065
 - gastrointestinal motility,.....11029
 - growth, excised tomato roots,.....10316
 - fungi,.....12065
 - of molds on soybean meal, 17751
 - pea embryos,.....4926
 - Phycomyces*,.....14003
 - Rhizobium*,.....8351
 - growth and fruiting, *Melanospore*,.....4736
 - heart's usage of pyruvic acid, 7707
 - hookworm anemia,.....16925
 - hyperthyroid rats,.....3722
 - histaminase activity,.....12683
 - leprosy,.....9626, 9627
 - metabolism, rat,.....9230
 - mycorrhizae,.....12078
 - nutrition of *Ustilago* spp.,.....6572
 - production of liver cancer, 12845
 - of low I goiter, rat,.....3723
 - respiration, yeast,.....14019
 - root growth, peas,.....15734
 - rooting of cuttings,.....15710
 - teeth,.....2062
 - thyroid function, guinea pigs, 7480
- excretion, excess per os as affecting, 12849
- intraspinal inj. as affecting, 12850
- in foods,.....7476
- as growth factor, for isolated root tips,.....17707
- in hay of different qualities,.....17070
- in human milk, ingestion of thiamin as affecting,.....16521
- hydration,.....5556
- in lard,.....7446
- Mn and, interdependence, rat, 12847

Vitamin (continued)

B₂ (continued)

- massive doses, effect on fertility and lactation, rat,.....16528
- propionic-acid bacteria adapted to synthesize,.....18712
- pyrophosphate, conversion to thiamin,.....2064
- in raw and evaporated milk,.....9238
- relation to carotenoid synthesis, *Rhodotorula*,.....6805
- to Zn deficiency, in beriberi, 11333
- requirement, dietary fat and,.....11012
- 12837
- fats as affecting,.....7446
- role in organisms, review,.....7069
- in plant growth,.....17702
- in spinal fluid after injection, 16440
- in sterilized milk,.....15626
- synthesis, by fungi,.....17675
- by isolated pea roots, mechanism,.....15735
- in plants,.....6591, 15732
- test, cataractulin,.....7482
- therapy, in alcohol-tobacco amblyopia,.....16516
- of polyneuritis,.....14944
- thiamin chloride standard,.....16510
- in urine, detn., stability and form,.....16520
- in yeast, factors affecting,.....3727
- B₂ (See also Flavins.)
- in bakers yeast,.....12840
- chicken requirements,.....15116
- deficiency, in blacktongue producing diets, rat,.....9228
- as cause of sprue,.....11346
- effect on thyroid, pituitary, adrenals,.....14951
- relation to avitaminosis B₁,.....14952
- wt. of spleen in, rat,.....5564
- effect on body wt. in hyperthyroidism,.....2060
- on hyperthyroid rat,.....3722
- factors in,.....16513
- filtrate factor, chemical nature, 9229
- in hyperthyroidism,.....7479
- in muscle, detn.,.....7483
- in organs,.....12848
- for poultry, need in reproduction,.....17110
- in silk worm pupae,.....16517
- yeast eluate factor,.....11008
- B₂, crystalline, prep.,.....5557
- deficiency, fatty livers in, rat, 9227
- lactoflavine-5'-phosphoric acid as affecting,.....5845
- effect on growth, excised tomato roots,.....10316
- on rats and pellagrous dermatitis,.....16924
- in Indian foods,.....5567
- microcytic hypochromic anemia and, dogs,.....4245
- in milk products,.....3082
- requirement, rat,.....3721
- structure,.....14563
- synthesis,.....12841
- C. (See also Scurvy.)
- absorption spectrum,.....2069
- accumulation, rats,.....3784
- in adrenals, hemorrhage, diphtheria and,.....16937
- in alveolar phagocytes,.....335
- anaphylactic role,.....13464, 13465
- antagonism to vit. A, scorbutic guinea pigs,.....11337
- in apples,.....9236
- ascorbic acid as precursor in blood,.....7307
- assay and sources,.....2067
- as bacterial growth factor,.....17474
- balance, hyperthyroidism as affecting,.....334
- in blood, Dutch E. Indies, 316, 328
- fetal, man,.....419, 421
- fowl,.....330
- of laying hens,.....11510
- vegetative nervous system as affecting,.....3642
- in blood and urine, fever therapy as affecting,.....3732
- book,.....2072
- in *Bryophyllum* leaves, temp. as affecting,.....1399
- in cassane leaves,.....271
- in cells, serum and urine, man, 329
- in cerebrospinal fluid, importance,.....9150
- chemistry,.....5551
- in plants,.....3093
- in Chinese food,.....2070
- in chloroplasts,.....17730
- color reactions,.....1942
- complement reactivation by,.....927

- Vitamin (continued)
C (continued)
deficiency, achlorhydria as affecting, 2388
clinical, therapeutic, 5850
diagnosis and therapy, 11350
effect on:
ejaculate, guinea pig, 16336
metabolism, guinea pig, 5568
skin oxidation-reduction potential, guinea pig, 16332
teeth, 2068
fatty livers and guinea pigs, 12858
in Greenland, study, 14937
in hyperglycemia vs. rheumatic fever, 9609
organ content in, 331
vit. B complex in, 5572
derivatives, activity, 2077
detn., arsenobenzol in urine, as affecting, 7570
in blood, 1960, 7307
in diseases, 12857
in colored and turbid solutions, 1911
in feces, and excretion in health and disease, 10864
in Indian fruits, 3737
in milk, 17089
in urine, 221, 1918, 7312
detoxifying action, 833
in diseased skin, 387
economy on scorbutic diet, guinea pigs, 5577
effect on:
absorption of Ca, 2078
action of epinephrine, 5573
of lipase, 9095
of thyrotrophic hormone on thyroid, guinea pigs, 11414
adrenal glands, 7897
agglutinin production, 2553
anaerobes, 17465
anaphylactic shock, 13515
artificial fever, 18156
bacterial toxins in vivo, 6029
blood picture in tuberculosis, 327
blood comp. in pregnancy, 12859
blood sugar hepatized dog, 800
Ca and P balance, 2035
capillary resistance, guinea pig, 16535
carotid sinus reflexes, 2296
cystinuria, man, 18474
diphtheria toxin, 8154, 13514
diseases in infants, 11267
exptl. poliomyelitis, monkeys, 14941
formation of collagen by osteogenic explants, in vitro, 8052
fungus growth, 972
immune potencies, 2572
influenza virus exp. infection, 13559
leprosy, 9626, 9327
liver glycogen, guinea pig, 7488
nitrophenol toxicity, 14824
pituitary gonadotrophin action, 9310
poliomyelitis, monkey, 7490
precipitin production, 2553
Shwartzman phenomenon, 13464
tissue culture, 11009
typhoid antibody production, 11587
urine reduction value, 2066
enzymes oxidizing, 7277
in ejaculate, man, 7489
excretion, after ascorbic acid and tri-benzoylascorbic acid injection, 5575
drugs affecting, 18178
test in children, rheumatic fever and, 2343
formation, from carbohydrates, 3592
in cowpea plants, light as affecting, 3089
in fruits and vegetables, Texas, 1271, 6509
in fungus extracts, 11018
in gastric juice, 12853
in German foods, 386
in germinating cereals, 16534
in grades of market milk, 13371
in *Helicobacter tuberosus*, 7469
hemoglobin and, coupled oxidation, 16416
in leucocytes, 8640
hypersensitivity relations, review, 8160
in liver of anoxic mice, 10970
in scurvy, 11339
metabolism in toxic goiter and myxedema, 2071
- Vitamin (continued)
C (continued)
in milk, diet as affecting, mammals, 3736
factors affecting, 5569
relation to oxidized flavor, 2480
Swedish, 13379
winter, effect of fodder fed, 13359
in milk and urine, man, 416, 7580
minimum requirements, man, 8175
mucin hydrolysis by, 12643
in nephritis, 2325
in oranges, factors affecting, 13881
in organs, esterase and, 3735
in hyper- and hypo-vitaminosis, 12854
oxidase in fruits, 5576
oxidation, bacteria as affecting, 13699, 17400
enzymic studies, 10856
heavy metals as affecting, tumor tissue, 3723
by peroxidase, 5464
pyrophosphate as affecting, 5570
in tissues and tumors, 2073
O₂ consumption, factors affecting, 286
in pathogenesis of tuberculosis, guinea pig, 7890, 7891
physical constants, 7485
in plant and animal tissues, Kon's Ag reaction and, 341
in pneumonia and bronchopneumonia therapy, 15214
poliomyelitis epidemiology in relation to, 4658
in potato, cooking and handling as affecting, 9235, 11017
in potato tubers, dist., 4927
as precursor of vit. C in blood, 7307
in preserved peas, 2079
in ration, relation to oxidized milk flavor, 9812
requirement, in fever, 2080
in leucosis and infections, 7876
man, 358, 5577, 7487
of pregnant and lactating women, 9431
relation to neocarphenamine sensitivity and anaphylactic shock, 6035
resorption by placenta, 419, 421
response of excised plant embryos to ascorbic acid present as affecting, 3088
saturation, deficit, detn., 7294
test, man, 11016
vit. C in gastric juice and, 12856
in sauerkraut, factors affecting, 6268
skin test for, man, 12855
in spinach, 14565
in spinal fluid, 14508
in splanchnic nerve after stim., 16530
stability, toward alcohols and sugars, 5571
factors affecting, 5571
of natural and synthetic, 2075
in soln., 332
in sterilized milk, 5526
storage, bananas in diet as affecting, 16825
studies, 5574
synthesis, by *Bacillus bulgaricus*, and lactic streptococci, 2734
by *Bacillus prodigiosus*, 4705
and excretion, rat, 16538
feeding organic compounds as affecting, rat, 16531
therapy, and prophylaxis of hemophilia, 14929
review, 325
after thymectomy, 389
in tissue, and endocrines, fasting as affecting, 13275
hypertrophism and avitaminosis B, as affecting, 14975
incubation as affecting, 11019
tissue phosphatases and, 11015
in tomatoes, 7486
acidity as affecting, 15739
in tonsils, 16532
in urine, factors affecting, 13024
renal function and, 2150
use in clinical medicine, 11020
in "vegetable water," China, 339
D. (See also Rickets; and various antirachitic agents, e.g., Cod Liver oil, Ergosterol, Ultraviolet.)
in acne, X-ray treatment and, 14567
in alfalfa and prairie hay, utilization by dairy cows, 17086
antilytic factor in carcinoma, 4181
antirachitic efficacy, liver and, 7491
- Vitamin (continued)
D (continued)
assay, 16587, 16598
P as affecting, 16542
availability to nocturnal animals, 342
calorigenic effect, hypophysectomy as affecting, dog, 16538
role of pituitary in, 12648
carcinogenesis and, 1482
in cow's colostrum, 5580
deficiency, dental caries and, 16514
effect on hematopoiesis, 2032
in pigs, effects, 11481
detn., direct measurement, rat, 12864
preventive method, 16871
effect on:
bone ash and body wt., fowl, 2081
chronic idiopathic parathyroid tetany, 9636
metabolism in idiopathic statorrhoea, 3739
serum phosphatase, fowl, 2032
thyroparathyroidectomized-nephrectomized rat, 11024
in egg and egg oil products, 343
examination by molecular distillation, 8740
excess, effect on bone comp. and N, Ca and P excretions, 309
in fish liver oils, role of menstrum in effectiveness, 12861
in foods, discussion, 2084
like substance from cholesterol, 5579
in milk, effect of season and feed on human, 16539
irradiated, 11021
as a function of energy input, 3742
in mineralized milk for calves, 13360A
in mutton bird oil, 9216
in Pacific fish oils, 10996
provitamin activity of substances, 11032
requirement of dairy calf, 11494
of turkeys, 16540
review, 5578, 14566
in rickets, mechanism of curative effect, 12862
stability in mixed feeds, 3738
sterols, chemical activation, 9238
supplement, value in pig ration, 15093
therapy, man, 10997
in renal rickets, children, 2342
from various sources, efficiency, 2081, 2082
D_a, effect on dog, 2083
on P low diet, rat, 9240
in treatment of bone fractures, pigeon, 12863
D_a, pyro-, dehydro derivatives, chem., 12865
E. (See also Fertility; Reproduction; Sterility.)
activity of tetramethyl-2-(4,8 di-methylnonyl)-6-hydroxycholemane, 2088
of tocopherol esters, 7492
bioassay, 5581
standardization of rat for, 344
deficiency, effect on muscular dystrophy, rat, 11026, 12863
on muscle creatine of suckling rats, 11159
in muscular dystrophy, rabbits, 9625
pituitary changes in ♂ rats and, 15021
preservation of fertility with α-tocopherol, 12805
sterility in ♀ rats, 12643
uterine changes, rat, 5846
destruction by rancid fats, 7495
detn. dose vs. response, 5481
photometric, 7494
effect on:
alimentary exudative diathesis, 16546
blood bactericidal action on staphylococci, 2517
blood cells and Hb, 5582
endocrine glands of guinea pig, 5897
fractionation, 11025
in neurolymphomatosis gallinarum, 16545
potency of chemical compounds, 12869
presence in bee bread and royal jelly of honeybee, 1592
in relation to ovarian and thyroid function, 7965
to tocopherol, 15689
requirement for growth, rat, 12867

Vitamin (continued)

- E (continued)
 review,7493, 9241
 senile paralysis and,18269
 symposium,9242
 synthesis,3846
 synthetic, carcinogenic properties,11281
 in tocopherol,12029
 in tocopherol homologue,12030
 tolerance,12866
 G. (See also *Riboflavin*.)
 in oil press cake meals,12851
 tubercle bacillus producing, isolation and detn.,2750
 K, anti-hemorrhagic activity of phthiocol and,16548
 assay,7815, 9243A
 chemistry,9243
 color reaction,16550
 of concentrates,16547
 concentration,16367
 deficiency, and intestinal flora, 16917
 in jaundice,16553
 effect on:
 clotting of blood,1961
 hemorrhagic diathesis of obstructive jaundice,14514
 liver disease, bile and,5839
 prothrombin, in biliary fistula and jaundice, rat,7497
 infants,11270, 14681
 levels of bile fistula rats,14568
 prothrombin and bleeding,11330
 prothrombin and blood clotting time, newborn human,7890, 12769
 teeth,2062
 estimation,7496
 inactivation by light,9245
 isolation,9244, 16549
 requirement, rat,7498
 summary,11027
 therapy, of essential thrombopenia,5834
 test for control,10944
 utilization in jaundice,16551
 K₁ in alfalfa,16552
 K₁ and K₂ assay,12871
 isolation,12870
 M, deficiency in monkey,311
 P-free diet, production,312
 T, in therapy of essential thrombopenia,5834
 Vitasterols. (See *Ergosterol*, irradiated; *Vitamin*.)
 Vitellaria (p.1866²), n. sp.,2927A
 Vitex parviflora, as wood, resistance of,15912
 Viticulture. (See *Grape*.)
 Vitis (p.1866²). (See also *Grape*.)
 genetics,8927
 genetics of floral morphology and function,1753
 seeds, (E.N.),2783
 californica, *Plasmopara viticola* overwintering on,17829
 Vitreous humor. (See under *Eye*.)
 Vitrinella (p.1872²) molengraaffi (Pl),16010
 VITTA (Platyh.) (p.1870⁴), n. spp.,6787
 Vitula edmondsoni, attacked by *Apanteles*,15937
 Vivarium, construction, laboratory type,3411
 Vivipariidae (Mollusca), p.1872¹
 centrioles and chromosomes in atypical spermatogenesis,8918
 Viviparus (p.1872²) javanicus, as interm. host of *Echinostoma*,17911
 viviparus, intermediate host for *Paracoenogonimus*,10542
 Vivipary (plant), in *Myrmecodia*,2916
 Voice. (See also *Speech*.)
 relay, for use with electric chronoscope,14488
 Volatile compound(s), from apples, effect on life phenomena of plants,1415
 from pears, ripening and storage as affecting,15758
 Volcanic ash, as fertilizer, ammonium sulphate as affecting,17608
 pioneer vegetation on,7210
 Vole, acid-fast bacillus from, golden hamster susceptible to,17297
 bionomics, susceptible to,16111
 field, susceptibility to acid-fast bacilli,17298
 rock, in Vermont,5230
 Volucella (p.1877⁴), n. sp.,6895
 Volumetric detn. of glands,10878
 Volvella (p.1863⁹), n. sp.,15458
 Volvella (p.1862⁴), species descriptions,11829
 Volvocaceae (Algae), p.1860²

- Volvocales, cytoplasmic constituents,7116
 Volvox (p.1860⁴), n. sp.,2789
 life history and morph.,8378
 Vomiting. (See *Emesis*.)
 Vorticella, stalk, fixation while extended,10520
 microstoma, sex differentiation in, 11099
 nebulifera, water balance in,6768
 Vorticellidae (Protozoa), p.1868⁴
 fixation of extended stalk,10520
 Vriesia (p.1864⁴) tonduziana,2841
 Vulpes (p.1883⁷). (See also *Fox*.)
 fulva, color phases in,5218
 food habits in winter,10822
 liver cells, intranuclear crystals in,4358
 regalis, census in Iowa,10824
 Vulture, new tapeworm from,15987
 Vulva, tumors, statistical analysis, Belgrade,18206
 Vulvovaginitis, gonococcic, chemotherapy by sulphonomide preps.,6132
 Yutina (p.1875⁵), n. sp.,8785
 Vuzinotoxine, effect on *Strep. viridans* in fibrin mass,483

W

- WADEURA (Hym.) (p.1878⁴), n. sp., 14270
 Wahl-Henius Institute, Bulletin, new periodical,16148
 Walchia (p.1874⁹), n. sp. from New Guinea,17980
 bulobensis, as vector of typhus,984
 Waldeckia, critical notes,3307
 WALDEHEIMATHYRS (Brach) (p.1871³),16008
 Walking. (See under *Locomotion*.)
 Wallflower. (See *Chetranthus*.)
 Wallpaper, As poisoning by, aspergillosis and penicilliosis vs.,13622
 Walnut(s), attacked by *Tetranychus telarius*, control,14106
 blight (*Bacterium juglandi*), control,1471, 17838
 culture, pH as affecting,15595
 diseases, in Oregon and Wash.,15889
 English, Carpathian var.,2989
 flatheaded apple tree borer on,10391
 irrigation, machinery for,1270
 vegetative propagation and var. tests, England,8513
 xylan in stone cells of nut,18789
 War, effect on mortality of children, 4174
 Thirty Year, effect on German population,9739
 -time, public health services in,8289
 Warbler(s), descr. and life histories, 8840
 prothonotary, nesting studies,7032
 Virginia's, nesting,1640
 Warehouse(s), insect pests, control,8192
 Warming time, as index of capacity for resistance,6070, 6071, 6072
 Washing, of skin, bactericidal action, 997
 Wasp(s), color sense,18028
 mimetic resemblance of flies to,8994
 as predators of parasites of pink bollworm, Sao Paulo,12231
 queen, instinct of animosity and tolerance in,9448
 solitary, habits,18027, 18028
 venom, hyposensitization to, by whole bee extract,15156
 Wassermann reaction. (See also under *Syphilis*.)
 antigen, fixation of non-specific substance in some guinea pig sera by,8260
 complement-fixing power of positive sera varying,837
 factors affecting,2536
 in infectious mononucleosis, 4457, 11667
 photograph recording,4491
 rôle of complement components in,13396
 for syphilis, chemical nature,8097
 mechanism,8256
 prezone and non-specific reactions,8268
 tubes for, cleaning and sterilizing method,17332
 Wastes, -farm, fuel gas from,6266
 Water. (See also *Drought*; *Evaporation*; *Humidity*; *Irrigation*; *Transpiration*; and under water bodies, e.g., *Lakes*, *Oceans*, *Streams*.)
 absorption. (See also *Hydration*.)
 by brain tissue, salt solns. as affecting,181
 from colon,16555
 by dry organic substances, detn. of curve constants,15790

Water (continued)

- absorption (continued)
 mechanism in *Pellia* (liverwort), 6370
 by orchid roots, factors affecting,12062
 by plants, review,3075
 temp. as affecting,4941
 by roots, relation to guttation,8578
 from soil by rice, temp. as affecting,6485
 by tobacco leaves, stomata related to,15791
 by *Vicia* roots, in various zones, 6559
 analysis of action on light,7224
 bacteria, acid-alcohol-fast bacillus from,2746
 anthrax bacilli viable in stagnant,2706
 colon-bacillus estimation by dilution method,1005
 of fresh,2764
 pathogenic, differential medium for,8275
 of sea, utilization of N compounds by,18707
 balance. (See also *Blood*, *water content*; *Diuresis*; *Edema*; *Thirst*; *Urine*.)
 in Addison's disease,3674
 in cotton, dewfall as affecting,4816
 in diabetes insipidus and adrenal-ectomized cats,14981
 salt and,11354, 14980
 in fever, detn.,7384
 in fistulous dogs, factors affecting,3671, 3672
 in infants,563, 7414
 as influenced by:
 ant. and post. pituitary,12998
 cold, hypothalamic nuclei and monkey,12643
 crustacean eye-stalk hormone, frog,12643
 glycogen metabolism,3673
 metabolic stimulating substances,12643
 nicotinic acid amide,12839
 pitressin, diabetes insipidus and adrenal insufficiency, 12643
 post-pituitary and adrenal,5611
7538
 metabolic vs. electrolyte methods of detn.,7414
 plasma vol. and available fluid changes in dehydration, 12643
 in surgical cases,14528
 bath, for expts. on isolated mammalian organs,213
 bloom, *Platydora* as component,1071
 in bluegrass, relation to hardness,14028
 bottom deposits in, heterotrophic bacteria,8357
 bound, in dairy products,6007
 in milk, heat as affecting,776
 brackish, *Anopheles*,8657, 8701
 in cabbage, effect on hardness,15773
 in cells, relation to hardness, potato,1401
 in cereal grains, humidity and temp. as affecting,17743
 chemical potential in solns.,5485
 chlorination. (See under *Water*, *purification*.)
 in coffee, organs compared,1239
 conduction. (See *Sap*; *Translocation*; *Transpiration*.)
 in conifer needles, relation to hardness,8086
 conservation, control recommendation, India,9015
 in orchards, terracing and contouring as affecting,13867
 consumption, effect on metabolism, horse,8072
 by range cattle,15101
 core, in apples, factors causing,13882
 in corn, effect on viability in storage,17591
 cultures. (See *nutrient solutions* under *Nutrition*, *plant*.)
 daily variations in leaves, related to sugar content, *Themedra*,12092
 distilled, effect on osmotic pressure of organs and blood,16811
 toxicity to *Tradescantia*,17738
 distilled and thawed, effect on blood catalase,9090
 drinking and soil, radioactivity effect on goiter,14974
 drops, effect on leaf temp.,6621
 economy of desert plants of Judaea,12584
 of lichens,3504
 of macchie plants,10789

Water (continued)

- effect on:
 amylase activity, in leaves, . . . 12106
 fruit and leaf growth, date palm, . . . 13897
 HCN content, sorghum, . . . 10188
 relationship between proteins and amino acids, plants, . . . 8590
 seed germination, hops, . . . 6588
 seed viability, fescue, . . . 10193
 vegetables, . . . 15586
 seed sensitivity to x-rays, wheat, . . . 1385
 soil structure, . . . 11961
 SO₂ injury to plants, . . . 6616
 tomatoes, growth and cracking of fruit, . . . 6515
 electrical dairy heater, . . . 1036
 elimination by contractile vacuole, *Peritricha*, . . . 15977
 in elm seed, effect on viability in storage, . . . 6584
 epidemiological relations, . . . 11711
 excretion. (See *Sweat*; *Urine*.)
 in fetus, rat, . . . 2044
 fish-disease treatment in, . . . 15361
 F in, mottled enamel and, . . . 9669
 removal by tricalcium phosphate, . . . 2419
 toxicity, . . . 14546
 in flower seed, effect on viability, 17692
 fog, sampling, apparatus for, . . . 16237
 fresh. (See also *Limnology*.)
Anopheles var. in, Holland, . . . 8657
 for greenhouses, apparatus for conditioning and regulating pH, 6522
 ground, occurrence in Arizona, . . . 7175
 rice irrigation as affecting, Ark., . . . 4821
 survey of properties, Germany, 15334
 heavy. (See *Deuterium oxide*.)
 in *Helianthus* leaves, daily and annual variations in, . . . 8598
 hemolytic action, . . . 13178
 in herbaceous stems, distr. gradient, . . . 12114
 pH. (See under *Hydrogen ion concentration*.)
 ingestion, effect on antidiuretic hormone of rat pituitary, . . . 14632
 olfactory, gustatory and trigeminal nerves as affecting, diabetic dogs, . . . 9454
 inhalation, effect on swimming (jelly-fish), . . . 3275
 iron-arsenic, effect on hematopoiesis, . . . 14513
 of La Bourboule, action on reducing ability of tissues, . . . 7286
 lake-, bacterial distr. in, . . . 10091
 lead-containing, causing basophilia, in children, . . . 14995
 in leaf tissues, effect on stomatal movement, *Fatsia*, . . . 8593
 loss. (See also *Desiccation*; *Evaporation*; *Transpiration*.)
 effect on microsporogenesis, *Tradescantia*, . . . 10715
 mineral, Carlsbad, effect on blood sugar, . . . 2031
 comp., dental caries relations, . . . 15297
 dental fluorosis and, . . . 8287
 effect on carbohydrate metabolism, rabbits, . . . 7483
 on toxicity of sparteine, . . . 5756
 in moss cells, effect on injury produced by liquid air, . . . 1402
 movement from conc. to dilute solns. through liquid membranes, . . . 174
 in muscle and gelatin, non-electrolytes as affecting, . . . 3549
 natural, P deficiency in relation to CaCO₃ content, . . . 12610
 penetration into *Halicystis*, measurement, . . . 15725
 in subsoils, in Great Plains, . . . 13851
 in plant cells, effect on hardness, 4946
 rôle and distr., . . . 12093
 pollution, coli-aerogenes index, technic and value, . . . 13650
 flagellates in, . . . 1071
 municipal, of German river, . . . 14400
 of streams, protozoan plankton as indicator, . . . 993
 proofing, of leaf epidermis, rôle of lipid secretions in, . . . 4957
 purification, chlorine sterilization, . . . 8293, 11714, 15324
 self, in lake, . . . 17362
 rain, chemical content, Oklahoma, 2938
 relations. (See also *Desiccation*; *Drought resistance*; *Rainfall*; *Transpiration*.)
 of bindweed, in corn ground, . . . 10177
 of cotton, Argentina, . . . 6472

Water (continued)

- relations (continued)
 of leaves, review, . . . 1383
 of plant cells, review, . . . 3075
 of plants, stomatal index and, . . . 9027
 of seed, . . . 10813
 of trees in Hungary, . . . 6531
 of vegetables, on muck soils, . . . 1234
 requirements. (See also *Irrigation*.)
 of cereals, factors affecting, . . . 4833
 of tomato, nutrition as affecting, 3169
 reservoir-stored, coliform bacterial viability in, . . . 13651
 retention, pituitrin as affecting, fish and reptiles, . . . 11048
 in roughage, detn., . . . 2494
 saline, effect on loess soils, . . . 11968
 salinity. (See *Salinity*.)
 sanitary analysis, media for, . . . 11796
 methyl-red and Voges-Proskauer tests, technic, . . . 13653
 sea. (See *Sea water*.)
 for shellfish-growing, sanitary analysis, . . . 996
 small bodies, classification on thermal bases, . . . 12613
 in soil. (See under *Soil*.)
 solvent, in frog muscle, . . . 2255
 storage in plants, light as affecting, . . . 4947
 sulphur, effect on water in blood and tissues, . . . 7357
 supplies, change, effect on mottled enamel, . . . 13277
 purification by protozoa, . . . 10020
 sterilization of sporiferous bacteria in, . . . 4660
 surfaces, evaporation rate, detn., 16248
 thermal, classification, and fauna, Iceland, . . . 7232
 diatom flora, . . . 7227
 in uterus, rat, . . . 9411
 utilization by alfalfa and bluegrass, factors affecting, . . . 1203
 by apples, Nebraska, . . . 15620
 by crop plants, relation to agriculture, . . . 4849
 wastes from chemical plants, control, . . . 15333
 well, sanitary survey in Germany, . . . 11704, 15313
 in wheat, effect on hardness, . . . 13833
 relation to respiration and hardness, . . . 14026
 vapor. (See also *Steam*.)
 absorption by orchid roots, . . . 12062
 Watermelon(s). (See also *Citrullus vulgaris*.)
 blossom-end rot, *Pythium* spp. causing, . . . 10542
 industry survey, P. I., . . . 4879
 juice, diuretic component, . . . 16808
 seed oil, chem. and phys. characters, . . . 18970
 soft rot (*Pythium ultimum*), . . . 8603
 vibrio cholerae in, viability, . . . 4647
 wilt (*Fusarium*), resistant var., . . . 3169
 Water rat. (See *Arvicola*.)
 Wattle(s). (See *Acacia*.)
 Wax(es). (See also *Paraffin*.)
 in apple fruits, changes during ripening, . . . 10222
 application to apples, effect on storage quality, . . . 18885
 to potato tubers, effect on storage and growth, . . . 18818
 in cell wall of coleoptile, oats, . . . 17705
 from coffee extracts, chem., . . . 12052
 effect on subcutaneous tissues, mice, . . . 14900
 in peat soils, extraction, . . . 13860
 in sugarcane, variety and N fertilizer as affecting, . . . 15777
 of tubercle bacillus, . . . 2775, 2779
 avian, mycolic acids, . . . 17444
 bovine, . . . 2752
 Wax moth. (See *Galleria mellonella*, and *Achroia grisella*.)
 Weasel. (See also *Mustela*.)
 bile comp., . . . 9261
 as *Ornithodoros parkeri* host, . . . 15296
 Weather. (See also *Climate*; *Meteorology*; *Plant diseases*, environmental relations; and especially under *Atmosphere*, *Humidity*, *Light*, *Rainfall*, *Temperature*, and other environmental factors.)
 Bureau, terminology, . . . 14384
 changes, relation to invasion of tropopause by polar and tropical air, . . . 16242
 and crop history, western Canada, 8982
 cycles, relation to insect-pest damage to potatoes, . . . 6697

effect on:

- abundance of clover midge and its destructiveness to alfalfa, 15903
 grasshopper populations, . . . 1498
 insecticidal effectiveness of As dusts, . . . 6712
 reproduction, *Strongyloides*, . . . 15959
 upper respiratory infections, . . . 8988
 industrial smoke drift and, . . . 16238
 influenza relations, . . . 15310
 winter, effect on survival and behavior of *Melolontha* larvae, . . . 15906
 Webera (p.1863³), n. spp., . . . 11841
 Weed(s). (See also *Herbicides*.)
 absorption of nutrients by, during development, . . . 6486
 of Alabama, . . . 4843
 control, in mechanized farming, . . . 4845
 dispersal, agents causing, . . . 1186
 of Fiji, *Piper aduncum* as, . . . 1197
Solanum torvum as, . . . 1196
 flora, quadrat studies, . . . 16267
 growth, soil acidity and, . . . 16260
 for hibernation of beetle pests, . . . 17866
 as hosts of *Bacterium solanacearum*, 3169
 nitrate storage in ruderals, . . . 116
 in pastures, control, Tenn., . . . 1193
 of rice, U. S. A., . . . 13816
 roots, effect on distr. of root system in *Agave*, . . . 14393
 skeleton. (See *Chondrilla juncea*.)
 solanaceous, as hosts for tomato leaf miner, . . . 1500
 succession on abandoned fields, Idaho, . . . 5385
 tolerance to soil, As, . . . 15933
 Zn absorption by, relation to white-bud of corn, . . . 6481
 Weevil, on cacao, New Guinea, . . . 14107
 effect on unhusked and polished rice, expts., . . . 3191
 Weight. (See *Body weight*.)
 Weil's disease. (See also *Leptospira tetrohaemorrhagiae*.)
 bile acid in, . . . 11081
 blood sedimentation rate in, . . . 10880
 in coal miners, etc., . . . 8302
 early diagnosis by spirochaetes in blood, . . . 8289
 epidemiology, . . . 8189, 8302
 immunization and, . . . 6200
 fatal infection in fish merchant, . . . 8229
 immunological aspects, . . . 17128
 incidence in U. S. A., . . . 15319
 Leptospira strains from rats and, comparisons, . . . 11641
 meningitis and paralysis of lower extremities associated, . . . 13608
 serodiagnosis, by agglutination and complement fixation, . . . 6086
 specificity, . . . 6080
 serological comparison of spirochaete strains, . . . 858
 in sewer workers, . . . 6200
 spirochaetes in liver of fatal case, 8239
 white rats as reservoirs, . . . 15328
 Well-Felix reaction, non-specificity for *Rickettsia*, . . . 13586
 Weinmannia (p.1865⁴), n. spp., 2865, 6431
 Weisia (p.1863³), n. sp., . . . 4748
 Wells, water, sanitary survey in Germany, . . . 15313
 Wenyonella (p.1868⁴), n. spp., . . . 1576
 Werneria (p.1867⁴), monograph, . . . 17536
 Wetting agents. (See under *Spreader*.)
 Whale(s). (See also *Cetacea*.)
 circulatory system of fetal finback, 675
 finner of eastern Pacific, . . . 12444
 humpback, pineal gland, structure, 4338
 reproduction and life cycle, . . . 1657
 Sei, life history and migration, . . . 1660
 sperm, life history and migration, 1658
 Southern Right, anatomy and biology, . . . 1659
 wt., calculation, . . . 5248
 Wheals, allergic, contour gage for measuring, . . . 13890
 histamine, ultraviolet as affecting, 795
 Wheat. (See also *Cereals*; *Flour*; *Rusts*; *Triticum*.)
 absorption of Se, S as affecting, . . . 1409
 amylase, negative effect of fumigation on, . . . 3190
Anguina tritici infesting, control, 17769
 aphids on, . . . 12382
 baking, variety tests, G. Britain, 13808
 blending vars., yield tests in New Zealand, . . . 15538
 brain, as feed for poultry, effect on growth and development, 15126
 branching of culm, . . . 15524
 breeding for disease resistance, value of *Tr. timococcum* in, . . . 4998
 browning rootrot, effect on stem rust damage, . . . 1484

Wheat (continued)

- bunt. (See also *Tilletia tritici*, *T. foetens*; *T. levis*)
 antagonism of mildew to, 4994
 chlorotic mottling of leaves due to, 10344
 constancy of virulence during host passage, 15861
 control, by Cu fungicides, 1474
 investigations, in Wyoming, 3159
 genetics of resistance, 15846
 grasses of tribe Hordeae as hosts, 15847
 infection, previous inoculation as affecting, 17810
 as influenced by:
 absorption of chemical solns., 5007
 crowding of seedlings, 15875
 high temp., 5006
 irrigation, 1467
 inheritance of reaction, 12150
 carbohydrate metabolism of leaves, 14017, 17719
Coprinus urticaceola on, 15448
 culture and var. tests, Argentina, 2961
 diseases, in U. S. A., 1938, 15890
 drought resistance, protease activity and, 15775
 durum, characters and uses, 17564
 dust, antigenic factor, nature, 15144
 enzymes, fumigation as affecting, 3190
 of Ethiopia, 13744
 extraction of P from soil by, 6475
 fall, variety tests in G. Britain, 2920
 fertilizers for, action, factors affecting, 4911
 flag smut (*Urocystis tritici*), irrigation as affecting, 1467
 flower formation, C/N ratio as affecting, 6604
 footrot (*Ophiobolus graminis*), pathogenicity of isolates, 17820
 freezing injury, periodicity, 15890
 genetics of phenol color reaction, 7132
 germ oil, effect on muscular dystrophy, rat, 9217
 relation to tumors, 4184, 4186
 5810, 11281, 13198, 13201
 tocopherol content, 12029
 germination, gluten changes during, 1079
 and growth, x-rays and soaking as affecting, 1385
 injury by organic Hg seed treatment, 1458
 grains, characters, fertilizer as affecting, 17601
 ing., testing method, 17602
 hardness, testing method, 16156
 phenylurethane as affecting, 16156
 staining, with Bismarck brown, 16116
 straw ratio, K and N as affecting, 4818
 granulation of meal, measurement, 6495
 growth hormones as affecting, when applied as dust to seed, 12070
 growth, irradiation of grain as affecting, 17714
 and yield, seed mutilation as affecting, 15566
 hardiness, factors affecting, 14028
 relation to earliness, 15771
 harvesting, mite dermatitis, Bulgaria, 17596
 10445
 Hessian fly attack, in Ohio (1938), 3185
 Hopes, origin and value, 13828
 leaf rust. (See also *Puccinia triticina*.)
 effect on yield and baking quality, 1479
 inheritance of resistance to, 8456
 pathogenicity as affected by light, 17822
 sources of inoculum for fall infection, 3169
 time-temp. relations of infection, 15842
 loose smut (*Ustilago tritici*), crowding of seedlings as affecting, 15875
 inoculation technic, 15807
 susceptibility of normal hybrids to, 16182
 mildew (*Erysiphe*), effect on chlorophyll, 3136
 on respiration, 1451, 3136, 6672
 pathogenicity, light and, 17822
 mineral nutrition, 4912
 new plasmodiophoraceous root-rot, 15454
 new registered vars., U. S. A., 1182
 N content, air temp. and soil moisture as affecting, 8466
 population studies, methods, 15551
 of Provence, cross fertilization, x-ray, short wave and mutation studies, 1744

Wheat (continued)

- purity of vars., chemical tests for, 13810
Pythium rootrot, salicylic aldehyde predisposing to, 12144
 rainfall as affecting, statistical correlations with yield, 2927
 rootrot (*Helminthosporium sativum*), environmental relations and control, 14080
 mineral nutrition as affecting, 8623
 root rots, seed disinfection as affecting, 3169
 root system, development, 8470
 rye hybrids, inheritance of hairiness in, 1754
 sawfly on, Ohio, 1938, 8643
 scab (*Gibberella*), resistance to, 6673
 solvation of colloids, winter vs. spring vars., 2943
 Sopa, origin and value, 13829
 sowing date, effect on Hessian fly attack, 3185
 spring, grasshopper injury, stem rust as affecting, 17877
 sprouts in bread, dietary value, 16451
 proteolytic enzymes in, 193
 stem rust. (See also *Puccinia graminis tritici*.)
 brown necrosis in resistant types, 14083
 control, in Colorado, 12157
 in Pennsylvania, 3169
 epidemiology in Mexico, 3169
 germination and infection, temp. as affecting, 3169
 overwintering of urediospores, 15810
 progress of barberry eradication in U. S. A., 1462
 resistant var. (Blackhull), 15856
 seed value, shriveling of kernels as affecting, 10370
 susceptibility, root rot as affecting, 1484
 stinking smut. (See *Wheat, bunt.*)
 subsoils, water in, Great Plains, 13851
 take-all disease (*Ophiobolus graminis*), dissemination and longevity in soil, 8602
 effect of soil microorganisms on, 1419
 pathogenicity, N and soil factors as affecting, 14088
 soil factors in, 6668
 use in bread making, compared with corn, 2946
 varieties, method of naming, 15531
 variety tests, Italy, 1175
 southwest France, 2955
 USSR, 13835
 vernalization, 13844
 of unripe seed, 17698
 viability, catalase content as index, 15539
 temp. and moisture content as affecting, 13833
 winter, Gem of Ovalov, 13846
 new var., 13831
 variety tests, G. Britain, 13792
 winter and spring, biochemical tests for detn., 13806
 yellow stripe rust. (See *Puccinia glumarum*.)
 yield, and composition, fertilizers as affecting, 15543
 and protein content, fertilizer as affecting, 8452
 trends in various parts of world, 8454
 Wheat stem sawfly. (See *Cephus cinctus*.)
 Whey, pH detn., 13863
 lack of filtrate factor in, 14558
 lactose and protein recovery from, 11498
 Whipform. (See *Trichuris*.)
 Whitefish. (See *Coregonus*.)
 Whitefly, greenhouse. (See also *Trialeurodes vaporariorum*.)
 biol. control, 3207
 White-spot disease, in marine fishes, 15385
 Whitmore's disease. (See *Melioidosis*.)
 Whooping cough. (See *Pertussis*.)
 Widal reaction. (See also *Eberthella typhosa*; *Gruber-Widal reaction*.)
 greasy, acid and alkaline tubes as affecting, 17348
 for typhoid and paratyphoid statistics, 13448
 Wild animals. (See *Animals, wild*; *Conservation*; *Game animals*; and under specific animals, e.g., *Beaver*.)
 Wild flowers. (See *Plants, flowering*.)
 Wild life. (See also *Conservation*; *Game*.)
 of Atlantic coast salt marshes, U. S., 9069

- breeding grounds, restoration of peat-land for, 7242
 conservation, 14430
 book, 14317
 practices affecting avifauna of Georgia, 5190
Echinococcus in, need for data, 15969
 highway mortality, 10817, 10825, 18105
 management, electric fence in, 5422
 manual, 10828
 range essentials, 10823
 woody plants as affecting, book, 4760
Wilka (p.1869) *anomala*, heat resistance, 15392
 stellata, nematocysts in, 3278
WILLMANNIA (Arch.) (p.1874), n. sp. and n. sub. fam., 6852
 Willow(s). (See also *Salix*.)
 cricket bat (*Salix caerulea*), watermark disease, weevils as vectors, 6638
 Willow leaf beetle. (See *Plagioderia versicolora*.)
Willrussellia (p.1865), sp. transf. to *Pitcairnia*, 11867
 Wilting. (See also *Drought*; *Transpiration*; *Water relations*.)
 coefficient, of rice soil, ammonium sulphate as affecting, 17589
 effect on pigments, *Tribulus*, 6549
 Wind. (See also *Air currents*; *Meteorology*.)
 breaks. (See also *Trees, shelterbelts*.)
 hedges as, book, 6327
 canceroprovocative irritant in, 4216
 damage to Swiss forests, 15633
 effect on grasshopper migrations, 14122
 on soil drifting, 10204
 erosion, control in Great Plains, 105
 firmness, of spruce, increasing by silvicultural measures, 3038
 forces and direction in North Sea, herring distr. and, 143
 ornamental shrubs resistant to, 10214
 profile, near ground, logarithmic law, 16247
 stresses, effect on root systems of trees, 9028
 timber, 9021
 velocity, in forest, 8552
 measurement. (See under *Anemometer*.)
 in relation to evaporation, 3490
 Wine, acids, and control, 6270
 bacterial diseases and control, 10039
 California, vitamin-B in, 13872
 grape fermentations for, *Eudemis botrans* as affecting, 11772
 of low volatile acidity, production and preservation, 10037, 10038
 Muscat, volatile acid fermentation in, 10038
 must, yeasts isolated from, Italy, 6340
 waste, effect on soil and plants, 13904
 white, mucilaginous and albuminous substances in new, removal methods, 8335
 Wings, of insects. (See under *Insects*.)
 Winter hardiness. (See *Hardiness*.)
 Winter injury. (See also *Cold*; *Freezing*; *Frost*; *Hardiness*.)
 to strawberries, prevention, 15592
 Wintering. (See *Hibernation*.)
 Wireworms. (See also *Elateridae*.)
 beetle. (See *Limontus californicus*.)
 control, field expts., 5033
 damaging tobacco, North Carolina, 1937, 5038
 false, food habits of larvae, 15908
 northern grain. (See *Ludius acrepennis destructor*.)
 of Pacific Coast, identification, 17995
 on potato, injury in relation to population, Wash., 10410
 sand. (See *Horistonotus uhleri*.)
 Witebsky-Klingesten complement fixation test, in Hodgkin's disease, 13248
 for tuberculosis, 13624
 Wolf(yes). (See also *Canis*.)
 hunting habits, effect on deer populations, 1882
 timber, *Echinococcus* in, Minn., 15969
Wolfiella (p.1864), flowering and seed germination, 2836
 Wolverine, adult *Taenia* in, Alaska, 1564
Taenia twitchelli from, 15985
 Wood(s). (See also *Cell wall*; *Cellulose*; *Lignin*; *Lumber*; *Root*; *Stem*; *Tracheid*; *Trees*; *Vascular system*; *Xylem*.)
 under common and scientific names of trees, etc.)
 American and Philippine, relative resistance to decay, 8542
 anatomy, in *Fraxinus*, 10145
 in Juglandaceae, 17527
 in *Salix*, 17559
 apitong, properties, 17643

Wood (continued)

- blue-stain, effect on decay resistance, 15885
 of jelutong, prevention, 10381
 composition, apple, 1267
 compression and tension, formation factors, 15630
 decay, of dipterocarp timber, in Philippine, 17851
 -resistance, blue-stain as affecting, 15885
 of Devonian plants, lacking annual rings, 10097
 durability for posts, in Netherlands, 17662
 energy values, spp. compared, 11997
 fire-retardant treatment, Wolman salts ineffective, 15865
 fossil, of glacial and preglacial periods, chem. composition, 4887
 fungi destroying, relative humidity as affecting, 6337
 of Gold Coast, structure and economic value, 3040
 gross features affecting quality, 15634
 identification by ash pattern, 8538
 of India, for sporting goods, 12006
 trade names, 13962
 permanent deformation by moistening and bending, 4993
 Philippine, weights, 8553
 preservation, by charring, 10248
 from *Lyctus*, 3197
 relative humidity as affecting, 6337
 from termites, 5050
 "tire-tube method", 10273
 preservatives, fungicide for, 15865
 tests with Tanalith and Triolith, 15865
 treatment in standing tree, 15653
 use of soil covering in testing, 17837
 properties, growing conditions as affecting, 15653
 knowledge among Romans, 1310
 pulp, microorganisms injuring, 1033
 pulping with butanol, 13941
 quality, rate of growth as affecting, 15656
 resin saturation in *Pinus*, 8446
 rots, in Connecticut, survey, 3164
 due to *Daedalea unicolor*, 3169
 to *Ganoderma resinaceum*, characteristics, 3110
 to *Lenzites gibbosa*, 14042
 to *Polyporus glomeratus*, 3169
 to *Robinia pseudoacacia*, 14043
 to *Stictisphyllum commune* in Philippine Is., 17757
 to *Ustulina vulgaris*, 3169
 immersion as affecting, 5003
 seasoning and felling time, 15655
 smoke, chemical comp., 10054
 South African, for furniture, 3032
 stain, of *Abies* fungi and insects associated with, 1428
 of *Machilus*, 12122
 staining, microinjection, 11926
 standard descriptive terms, 13943
 starch, quantitative recognition, method, 3197
 strength, coniferous fibers, 8448
 natural factors as affecting, pine, 8448
 resin ducts as affecting, larch, 13785
 tests and microscopy of *Pinus*, 8448
 sugars, butyl and isopropyl alcohol fermentation, 11770
 summer-wood ratio, age as affecting, 2917
 used for paper in France, 15629
Xyleborus in shipment as affecting, 8647
 Woodchuck. (See also *Marmota monax*)
 skull, malocclusion in, 5230
 Woodlot, clearings, bird life, 1880
 seasonal variation in soil acidity, 16251
 Woodpecker(s), American, life-history studies, book, 12437
 lesser spotted, life history, 5203
Woodrat (p.1863*) metabolism, 6767
Woodrat (p.1863*) *oregana*, in Iowa, 1096
 Wool. (See also Hair)
 amino acid comp., 7977
 Angora rabbits, production tests, 13839
 casein substitute for, 13835
 fibers, thickness, measurement, 5995
 fleece, breed characteristics, 11480
 investigation, 2490
 regional body development, 4407
 thyroidectomy after thallium poisoning as affecting, 5791
 growth and quality, nutrition and climate as affecting, 13853
 factors affecting, 2497
 keratin from, sp. specificity, 4346
 measurements, 2497
 quality, inheritance, sheep, 7147
 rabbit's, production measurement, 11515
 shrinkage, variation in, 2483
 silicon in, diet and, 11487
 Wool grease, as oil substitute in sprays, 10468
 Wool maggot fly. (See *Phormia*)
 Woolly aphid. (See *Eriosoma lanigerum*)
 Work. (See also *Athletes*; *Exercise*; *Fatigue*; *Muscle*; *Training*; etc.)
 blood serum as affecting adrenals after, 3898
 capacity, in depressive patients, daily curve, 2248
 on diets of carbohydrate and fat, man, 10965
 as influenced by:
 cola and caffeine, 16777
 cortin, eviscerated rats, 3841
 hypoglycemia, man, 10966
 effect on:
 adrenal gland, rat, 5629, 9314
 blood distribution, 16721
 blood pressure, pulse and coronary blood flow, 7711
 heart, 7715
 pulse, posture and, 9512
 efficiency, factors affecting, 7398
 heavy physical, longevity and, man, 433
 mental, length of period, work curve and, 11116
 muscular activity patterns during, 7680, 9437
 physiology, review, 2246, 9493
 respiratory quotient in, 9133
 Worm(s). (See also *Annelida*; *Helminths*)
 bladder, of sheep, Sweden, 5091
 carriers, blood picture, 14933
 encytraeid, effect on sewage bacterial beds, 6217
 intestinal, effect on liver extract in pernicious anemia, 14925
 parasitic, cantharides blister for detecting, 13625
 retraction reflex in, 462
 serpulid, as fouling organisms, ecology, 10793
 stomach, in goats, 15369
 of Tahiti, 1676
 Wormseed oil. (See *Chenopodium oil*)
 Wort, malt, bios shortage in, 6258
 WORTHENELLA (Brach.) (p.1871*), new subgenus of *Productus*, 3292
 Wound(s) (animal). (See also *Burns*; *Injury*; *Trauma*)
 articular, in small, chemotherapy, 11601
 dental, infections due to, 13597
 healing, bio-electric correlates, 200
 effect on vit. C in organs, 331
 as influenced by:
 cystine and methionine, 14532
 erythrocytes, 3623
 neutropenia and sepsis, 16900
 vit. A, 7472
 vit. C, infant, 11267
 hypersensitivity to catgut in disruption, 9883
 magnet vs. chemo-therapy, 17256
 ointments for, evaluation technic, 11705
 Wounds (plant). (See also *Injury*; *Regeneration*)
 cork formation in potatoes, factors affecting and relation to dormancy, 12075
 dressings, perennial apple canker following injury by, 15859
 effect on bud variation, sweet potato, 7181
 on growth, fruits, 12079
 healing in fruit trees, 15709, 17796
 in latex tubes, recovery mechanism, 6624
Wuchereria (p.1870*) *baneroffi*. (See also *Filaria*)
 endemic, Fed. Malay States, 5094
 larvae, effect on mosquito, 8694
 mode of transmission, 8714
 in sandfly, 3247
Wuchereria, skin lesions, in negroes, Africa, 12256
Wulfia (p.1867*), n. var., 13751

X

- Xanthanetrus* (p.1877*), n. sp., 6897
Xanthine(s). (See also *Hypoxanthine*)
 derivatives, autonomic activity, 5754
 3,7-dimethyl. (See *Theobromine*)
 effect on growth, *Obelia*, 2047
 on livers damaged by chlorinated hydrocarbons, 11358
 hypo-, isolation from earthworm, 1916
 N-ethyl, chem. and pharm., 9564
 preparations, prevention of liver cirrhosis by, 7509
 protection against CCl₄ liver damage by, sodium, use in CCl₄ poisoning, 12643
 1, 3, 7-trimethyl. (See *Caffeine*)
Xanthium. (See also *Cockle bur.*)
pennsylvanicum, photoperiodism, N as affecting, 10817
 photoperiodism in, relation to hormones, 4929
Xanthochrous obliquus, beetle feeding on, 16030
Xanthomatosis. (See also under *Dermatosis*)
 heart diseases and, 2274
 production in rabbits, 12643
 XANTHOMONAS (Bacteria) (p.1861*), 15413
Xanthophyceae (Algae), p.1860*
Xanthophyll. (See under *Pigments*)
Xanthoproteic reaction, in kidney insufficiency, 17335
Xanthoproteins, serological reactions, 8138, 9876
Xanthoria (p.1862*), tax., 6364, 15473
Xanthorrhoea hastile, *Herposira* on, 8407
Xanthoura (p.1881*), food habits, 9064
Xanthoxyl S. chemistry, 10290
Xanthoxylum carolinianum, chemistry, 10290
 X-bodies. (See *Inclusion bodies*)
 Xenia. (See also *Metazenia*)
 genetic control, *Zea mays*, 14362
Xenocarcinus (p.1874*), tax., 1616
Xenopsylla (p.1878*) *brasilensis*, as vector of plague, 13637
cheopis, population dynamics, climatic effects on, 1514
 on rats in French coal mines, 8800
 as vector of plague, 13637
 as vector of typhus, 10023
occidentalis, *Liometomys* host for, 14279
Xenopterygii (Pisces), p.1880*
Xenopus (p.1880*), coccyeal lymph hearts, innervation, 15014
 technique of feeding for pregnancy test, 13039
laevis, care and suitability for pregnancy test, 11097
 color changes in response to citranelol and skatol, 13051
 head anatomy, 11379
 pregnancy test, 3964
 sexual cycle, factors affecting, 3954
 vertebral column, development, 5880
Xenotis megalotis marginatus, parasites, Florida, 15948
Xenylla (p.1874*) *lesnei*, 3368
 Xeroderma. (See under *Dermatosis*)
Xeroderma pigmentosum, case histories, in Tunisia, 976
 familial incidence in Tunisia, 974
Xeromegachile couleana, 6924
 Xeromorphism. (See *Drought, resistance*)
 Xerophthalmia. (See also *Vitamin A*)
 due to malnourishment, children, 2351
 Xerophytes, adaptations, in relation to habitats, 130
 of Judea, water economy, and classification, 12584
 types, 10789
 Xerophytism, in fruit trees, relation to leaf shape, 13888
Xerostylos (p.1867*), n. spp., 10137
 Xerotherm(s), communities in Hungary, 7202
Xerula (p.1862*) *caussei*, 1077
Xestocephalus (p.1875*), new species from Australia, 18016
Xestops (p.1880*) (†) *pierceli*, in N. America, 3404
Xiphias gladius, parasites of, 6795
Xiphochilus (p.1880*) *fasciatus* (Lienardella), 5155
Xiphophorus (p.1879*), n. sp. Mexico, 8803
Xiphosura, p.1874*
Xiphosurus. (See *Limulus*)
 X-rays. (See also *Irradiation*)
 of abdomen, alarm reaction produced by, rat, 5475
 activation of tobacco mosaic virus by, 6651
 biological effects of densely ionizing, 5305
 in cheese-ripening analysis, 1041
 in detn. of cardiac stroke vol., 13120
 of heart volume, work and, 7715
 of tuberculosis incidence in relief population, 13645
 of vol. of white-eye locus, *Drosophila*, 1769

SUBJECT INDEX

X-rays—Yeasts

X-rays (continued)

- in diagnosis of aortic valvular calcareous disease, 5714
- of chronic F poisoning, 5871
- of rheumoperiostitis, 16906
- and therapy of optic nerve glioma, 14902
- of tuberculosis, 16903
- diffraction, measurement, of fibrils in cell wall of pine, 8447
- diffraction patterns, of tobacco mosaic virus, 8169, 15834
- dosage, frequency of structural changes in chromosomes and, *Drosophila*, 5334
- effect on:
 - Apocynum*, growth and fiber characters, 1387
 - argentaffin tumors of small intestine, 5799
 - bacterial dissociation rate, 17456
 - blood and tissue proteins, 5457
 - blood toxicity, 16322
 - bone marrow, 1908
 - brain and spinal cord, monkey, 12694
 - breast carcinoma, 14887
 - Brown-Pearce rabbit epithelioma, 16320, 16325
 - buds, *Salpiglossis*, 15753
 - cancer of digestive and respiratory tracts, 13235
 - cell protein and nuclear membrane permeability, *Unio* eggs, 16326
 - chick gonads, 12695
 - chromosomes, *Oecanthus*, 51
 - crossing over, *Antirrhinum*, 12501
 - Drosophila* eggs, inheritance structure of cell and, 5472
 - Drosophila* pupae, comparison with γ rays, 14372
 - erythropoiesis, 3576
 - detection, 3577
 - flower color, *Petunia*, 14360
 - goldfish, 14467
 - hemolytic power of snake venom, 12697
 - immunity to Shope fibroma virus, 16845
 - leaf structure of cotton, after radiation of seed, 14013
 - lymph formation, dog, 14470
 - lymphomatoid tumors of spinal epidural space, 16839
 - maize seeds, at liquid air temp., 16180
 - mutation rate, *Drosophila*, temp. and, 16206
 - neuroblast chromosomes, *Chortophaga*, 56
 - organisms, neutrons and, 7319
 - ovary, guinea pig, 5644
 - plants, compared with auxins and colchicine, 10302
 - respiration and anaerobic glycolysis of mouse kidney, 14469
 - respiration, plants, 14011
 - sarcoma tissue cultures, 14910
 - sarcomata and transmissibility, mice, 5800
 - sedimentation and light absorption of serum albumin, 5510
 - seed germination and growth, 12648
 - wheat, 1885
 - seed and seedlings, 15751
 - skin, 8578
 - swelling capacity of animal tissues, 7256
 - tubercle bacilli, 6085
 - tulip bulbs, 1466
 - tumors, inorganic nuclear content as affecting, 4185
 - tyrosinase in insect egg, 12704
 - wheat, 1744
 - filtration, effect on divergent beams at supervoltages, 14471
 - grenz rays, in treatment of eye diseases, 14473
 - hereditary changes in descendants of mice exposed to, 5476
 - high voltage tubes, 16391
 - induction of chromosomal alterations, *Drosophila*, 87
 - of chromosomal fragments without spindle fiber attachments, *Chortophaga*, 8912
 - of dominant and recessive lethals, *Habrobracon*, 1784
 - of mutant gametophytes, *Physcomitrium*, 64
 - of interchanges in relation to mechanism of induction, maize, 5311
 - of reverse repeat in 3d chromosome, *Drosophila*, 7118
 - injury from, kinetics, 8868

X-rays (continued)

- kymograph, in detn. of heart size, 5720
- of valvular efficiency, 9523
- heart output and, 9522
- mechanism of mutating due to, barley, 12525
- morphogenesis in *Drosophila* and, 8055
- photography, cranial, technic, in rat, 16387
- of kidneys, value in difficultly diagnosed cases, 1905
- sectional, of chest, 16327
- skull pictures of pigs, 11479
- of urinary bladder, importance, 4202
- of pituitary, effect on ovary, 202
- in pulmonary tuberculosis, book, 7860
- reaction of tissues to, 10860
- recovery from, low temp., as affecting, *Ascaris* eggs, 14465
- reducing action on redox dye indicators, 3579
- secondary, scattering and attenuation, detn., 12693
- sensitization by direct electric current, 12692
- of spleen, control of hemorrhagic disorders by, 14468
- stray radiation survey of high roentgen installations, 12691
- in study of compounds of biological interest, review, 14440
- of hearts of anemic children, 16823
- of heart and thoracic blood vessels in pulmonary heart disease, 14775
- of lignin structure and molecular dynamics, 3103
- of ventricular contraction in cardiac infarction, 11189
- teleo-photography, of heart transverse diameter, 4097
- therapy, of asthma, 17172
- of cancer, report, 14472
- indications for, 16823
- of toxic goiter, 16936
- of tuberculous tracheobronchitis, 13245
- tube, condenser discharge type, biological effects, 12696
- wave length and therapy, 12701
- in zoological research, 16319
- Xylan, chemistry, 17744
- formation in stones of cherry, plum, and walnut, 13789
- structure and enzymatic splitting, 14031
- Xyleborus* (p.1876*) *badus*, as affecting wood in shipment, 8647
- cryptographus, on poplar, France, 8653
- Xylem. (See also Root; Stele; Stem; Tracheids; Vascular system (plant); Wood; etc.)
- ascent of salts in, 15748
- bacterial pathogens, physiol. requirements, 4970
- diameter of vessel in angiosperms, taxonomic value, 13783
- method for examination, 13782
- vessel pitting in Eucryphiaceae, type, 10125
- Xyleutes* (p.1877*) *ceramicus*, life history, 15912
- Xylobotryum* (p.1861*) *coralloides*, on *Ackama*, 8407
- † *XYLOMASTIXIA* (Dicot.) (p.1866*), *lusatica*, 4724
- Xylopa* (p.1865*), n. spp., 2865, 15483
- Xylorrhiza*, as indicator of seleniferous areas, 10179
- Xyloryctes satyrus*, *Thelastoma* from, 17950
- Xylose, ascorbic acid production from, by *Bacillus prodigiosus*, 4705
- Bacillus prodigiosus* inhibited by, 4713
- butyl alcohol fermentation, 11770
- as a cataractogenic agent, 12774
- isopropyl alcohol fermentation, 11770
- Xyloterus* (p.1876*) *lineatus*, life hist., 1511
- Xylose, d- and l-, metabolism, depancreatized dog, 14537
- Xyridaceae (Monocotyledones), p.1864
- Xyridales (Monocotyledones), p.1864
- Xyris* (p.1864*) *anceps*, leaf structure, 2839
- Xysmalobium* (p.1867*), n. sp., 2870
- XYSTOCRINUS** (Echin.) (p.1871*) (Cb), 10555

Y

- Yak(s), blood comp., comparison with cattle and their hybrids, 8954
- chromosome number, 16165
- Yam. (See *Dioscorea*.)
- Yarrow. (See *Achillea*.)
- Yates, Harry Stanley, biography, 3431

- Yatren, in amoebic dysentery and hepatitis therapy, 11611
- Yaws. (See *Treponema pertenue*.)
- Yeasts. (See also Fermentation; *Saccharomyces*, and other genera of yeasts and yeastlike fungi.)
- acetaldehyde oxidation by, 10045
- adenylic acid formed by, 10985
- amino acids utilized by, 8588
- bakers', pyruvic acid utilization by, 2732
- biochemistry, review, 14440
- bios as affecting, differences in strains, 15738
- bios content, factors affecting, 8569
- in bread making, book, 15393, 15894
- bread-, *Mycotorula* and *Blastodendron* from, 4646
- brewer's, effect on pernicious anemia, 9615
- practical control, 17402
- testis-stimulating extract from, 7966
- cell volume in salt soln., 15396
- citric acid production from acetic acid by, 13676
- death, by devitrification, 1400
- recrystallization as related to, 1400
- effect on:
 - adrenalectomized rats, 14561
 - cozymase in blood, 5841
 - pernicious anemia, 5843
 - retrobulbar neuritis with pellagra, Nigeria, 13270
 - ergosterol in, 4694
 - excretion of N by, 1397
 - extract, effect on intestinal absorption of chloride, 12643
 - on tissue metabolism, 2040, 2042
 - feeding, effect on tumor production, 12846
 - fermentation, inhibition by blood in carcinoma, uremia and pre-uremia, 5516
 - reduction of estrone to estradiol during, 9386
 - fermentation vs. respiration types, media as affecting, 11759
 - film- from pickle brine, 17405
 - fusel oil from leucine formed by, 10062
 - genetics, and spore formation, *Saccharomyces*, 17501
 - glucosidic synthesis and hydrolysis by, kinetics, 10829
 - glycolysis, inhibition by cytolyzed brain, 14719
 - growth and fermentation, amino-acid degradation products as affecting, 6271
 - growth regulators for, 4714
 - growth substances from, effect on bacteria, 1059
 - heat resistance, 15392
 - hexose fermentation by, glycogen synthesis and, 4690
 - isolation and culture, molasses agar for, 9979
 - life cycle, irradiation as affecting, 7233
 - like organisms, incidence in normal stools, 8252
 - from scalp, 971
 - on limburger cheese, factors affecting, 10066
 - longevity, 6261
 - metabolism, factors affecting, 4924
 - new spp. from wine must, Italy, 6340
 - oxidases in, 15778
 - oxidation systems in brewers' vs. bakers', 17401
 - O₂ consumption, sensitivity to cyanide, 12643
 - pantothenic acid in, 16522, 17722
 - phosphorylation of carbohydrate in, 15763
 - respiration, as influenced by:
 - anabolism, 15760
 - KCN, kinetics, 12107
 - pantothenic acid and other organic compounds, 14019
 - salts, 15396
 - tissue extracts, 2018
 - respiration stimulants from, extraction, 1388
 - sauerkraut pink color due to, 2729
 - sensitivity to inhibitors and measurement of their effects, 6271
 - strains for rum fermentation, 4687
 - thiamin in, 5562
 - Torulopsis pulcherrima* fermentations, 6269
 - vit. B in, 3727, 7461, 12840
 - wound hormones produced by, 1859
 - 3062

- Yew. (See *Tarus*.)
 Yellow fever. (See also *Aedes*; Mosquitoes.)
Aedes triseriatus as vector, exptl., 12210A
 chemotherapy, 17243
 epidemiology, diagnosis and immunization, advances in, 15332
 epidemiology and present status in S. America, 6218
 jungle form, mild endemicity and immunity relations, 8207
 mosquitoes, collecting and feeding, 8661
 lesions, liver necrosis after burns and, 9250
 mosquito transmission from vaccinated individuals negative, 8142
 nervous system lesions, 9610
 neurotropic virus, development in mosquito vector negative, 8142
 vaccination, effect on latent malaria, 15154
 safety of live neurotropic virus strain for, 8142
 vaccine virus, negative transmission by mosquitoes, 6220
 virus, behavior in mosquito, 13558
 in jungle mosquitoes, 13581
 negative transmission by mosquito for cultured, 6220
 oral transmission to monkey, 15223
 urea, as affecting, 8198
 "viability" in vacuo dried, 8208
 virulence, animal passages as affecting, 8208
 Yield(s). (See *Agriculture*; *Agronomy*; *Crops*; *Fruits* (edible); *Growth*; *Vegetables*; and especially under particular crops, vegetables, etc., e.g., *Hay*, *Wheat*.)
 Yohimbic acid chlorohydrate, effect on action of donaxine, 13175
 Yohimbine derivatives, effect on arterial strips, 5738
 effect on:
 Daphnia magna, 4163
 hypertension, 13178
 ♂ genitalia, 16622, 16623
 toxic apnea, rabbit, 14814
 vaginal smear, 9292
 estrogenic effect, 14649
 osseous, intramedullary inj., effect on blood pressure, 13103
 Yolk. (See *Egg*.)
Yucca (p.1865²), anatomy, 6441
 in dung of ground sloth, 7048
- Z**
- Zabrotes* (p.1876²) *subfasciatus*, development temp. changes as affecting, 14386
Zaglossus (p.1882¹) *barion*, hairs, cuticular-scale pattern, 7979
Zaglyptonotus (p.1878²) morph., phyl., 1632
Zalophus (p.1883²) *californicus*, winter influx in California, 18093
Zanclognatha (p.1877¹), syn., 12394
Zanthoxylum (p.1866³), n. spp., 2838A
 hamiltonianum, saponin from, as mosquito larvicide, 8426
Zapodidae (Mammalia), p.1883¹
Zapus (p.1883¹) *h. hudsonius*, life history, 5250
Zea (p.1864¹) *mays*, (See *Maize*.)
Zeacrinus (p.1871¹) (Ob), redefined and n. spp., 5113
Zebra. (See *Equus*.)
Zebina detrita, as interm. host of *Dicrocoelium*, 14133
Zeitschrift für Altersforschung, new periodical, 12498
Zeldia (p.1870⁴) *odontocarpa*, 16000
Zelleriella (p.1868³) *corniola*, from *Leptodactylus*, 12277
Zenaidura macroura, food habits, 18079
carolinensis, *Trypanosoma* from, 3257
Zeolite, artificial. (See *Permutit*.)
Zephirol, saponin-like action, 16772
Zeusera pyrina, on ash in Rumania, 3196
Zewa (p.1874⁴), tax., 1616
Zieridium (p.1866¹), n. sp., 4783
 Zinc, absorption by plants, weeds vs. cover crops, 6481
 antianemic effect, 14512
 deficiency, disease, in *Citrus* spp., 8618
 effect on leaf structure, 6864
 rats, 7454
 detn., in tissues in presence of other metals, 16344
 effect on:
 forest trees, factors affecting, 1410
 growth and fermentation, in *Rhizopus*, 12061
 growth, reproduction and blood picture, rat, 270
 hemoglobin, 7375
 insulin action, 3648
 in epidermal structures, 7978
 in beriberi, 11338
 as essential element, for tomatoes, 13972
 insulin crystals, therapeutic advantages, 11223
 in pancreas in diabetes, 359
 requirement, man, 7458
 role in plant nutrition, method of study, 10297
 salts, prolongation of effectiveness of pituitrin by, 16592
 chloride, to control bark beetles, 14125, 14126
 sulphate, effect on regenerating respiratory epithelium in epidemic influenza, 627
 in specific gravity detn., 8708
Zingiber. (See also *Ginger*.)
Zinnia, structure in relation to soil moisture, 12587
Ziphiidae (Mammalia), p.1883²
Zitteloceas (p.1873⁴) *clarkeanum* (O), from Wisconsin, 10561
Zizyphus, *Trialeurodes* on, 3844
 jubaba, culture of lac on, India, 14102
Zoantharia (Coelenterata), p.1869⁴
Zonite. (See under *Hypochlorites*, *sodium*.)
Zonitidae (Mollusca), p.1872²
Zonuridae, eye, sclerotic plates, structure, 5879
Zoocercidia. (See *Galls*.)
Zoogeography. (See also *Life zones*; *Phytogeography*; For material indexed geographically, see *Geographic Index*.)
 of ants of East Baltic region, 18026
 bird migrations, book, 16082
 of bird ranges, drainage systems as affecting, W. Virginia, 6991
 of brackish *Gastrotrocha* of Europe, 14221
 of characinid fishes, 3380
 Cladocera, of Wallacea, 12319A
 codling moth as major factor in orchard failure, U. S., 17856
 Coleoptera of Wallacea, 12346
 crop rotation, effect on root insects of maize, 17865
 of crustacea of Far East, 16015
 in S. Hemisphere, 12320
 deductions from distr. of European and Siberian *Oreogonus* and its ectoparasites, 3396
 dispersion of *Anopheles gambiae* in Brazil, 8663
 distr. of mating types and groups, *Paramesitum*, 7143
 distributional units, recognition, 10659
 ecological barrier hibernation, as affecting mammals, Idaho, 10659
 of Embioptera, 6942
 evidence for land bridge, in Tertiary, 1824, 3380
 extent of Sonoran Zone into Canada, 5252
 factors regulating distr. of fish fauna, Indian Tibet and Kashmir, 7223
 of freshwater fauna of Taiwan, 10802
 of freshwater fish on Atlantic and Pacific slopes of Panama and Colombia, 1637
 of German fauna, program for study, 12579
 of greater Antilles, origin, 5374
 of Greenland, 1828
 of high alpine forms in east Alps, 7182
 insects, arachnids and nematodes on edible fungi, bibl., 8646
 invasion of Mississippi River by Gulf of Mexico fishes, 3381
 of isopod, African-Australasian distr. of genus, 10569
 of Lepidoptera of United States and Canada, check-list, 3556
 of Little Diomed Island Bering St., 13776
 of mammals of Idaho, 10659
 of *Margaritana margaritifera*, Europe, 14394
 migration of fish through Panama Canal, 18051
 of *Purpura* (Moll.), 3303
 mosquito control, effect on wildlife, 10434
 of northern- and southern-hemisphere whales, 1657, 1658, 1659, 1660
 origin of biota of islands of eastern Pacific, 34
 of insect pests of meadows and pastures, 15904
 probable limits of range of Japanese beetle in N. America, 15901
 of reptilia and amphibia of Great Smoky Mts. Park (Tennessee), 14288
 of robber flies of Colorado, 1622
 of Siam and Malay Peninsula, 1648
 of Sonoran province, 5367
 of sponge fisheries, 10531
Zoogonidae (Platyhelminthes), p.1870²
Zoogonoides (p.1870²) *acanthogobii*, 6803
Zoology. (See also *Biology*; specific phases, e.g., *Embryology*.)
 elementary, laboratory guide, 16128
 general, text, 10, 11, 12470
 invertebrate, textbook, 9
 laboratory guide, 9765
 research, radiography in, 16319
 statistical methods in, book, 12473
Zoomastigoda (Protozoa), p.1868¹
ZOOPOGACEAE (Fungi) (p.1861²), 6341
Zoopage, n. spp., 6341
Zoopore(s). (See under *Spores*.)
Zootermopsis, cellulose digestion, rôle of intestinal protozoa in, 7185
Zoothamnium (p.1868⁴), food vacuoles, movements, 3264
 water balance in, 6768
ZOPFINULA (Fungi) (p.1861⁴), 15453
Zophodia (p.1877²), spp. types for new genera, 8792
Zoster herpes. (See *Herpes zoster*.)
Zostera, *Lucernaria*, spp. on, 3273
marina, disappearance, factors in, 1835
Z-test. (See *Sampling*.)
Zygnemataceae (Algae), p.1860²
Zygocera (p.1876³), n. sp., 10595
Zygocotyle (p.1870³) *lunatum*, in ducks, Michigan, 1591
Zygodon (p.1863⁵), tax., 4748, 11841
Zygomycetes (Fungi), p.1861²
Zygophyllaceae (Dicotyledones), p.1866⁴
Zygophyllum dumosum, root system, 10780
Zygopichia (p.1861³) *chiantiglana*, 6340
Zygorhynchus (p.1861²), new species, 6354
Zygosaccharomyces (p.1861³) *florentinus*, 6340

